Company Profile

American Management Systems

Chairman:	**Charles O. Rossotti**
Vice Chairman:	**Patrick W. Gross**
CEO:	**Paul A. Brands**
President:	**Phillip M. Giuntini**

4050 Legato Road
Fairfax, VA 22033-4003

Phone:	**(703) 267-8000**
Fax:	**(703) 267-5111**

The following profile outlines the products, services and support offered by American Management Systems (AMS) to their clients for systems integration services.

1. Description of Principal Business

AMS is a full-service systems integrator providing information technology consulting, including re-engineering, systems integration and systems development (including reusable and custom software) services.

AMS specializes in providing services to large financial services firms, federal government agencies, state and local governments, colleges and universities and telecommunications firms.

2. Organization

AMS is currently organized by vertical industry lines of business—State and Local Government and Education, Federal Government, Financial Services, Telecommunications and Pharmaceuticals. Systems integration services are delivered by three groups—East, West and South.

Established in 1993, the AMS Center for Advanced Technologies identifies and capitalizes on the application of emerging technologies. The Center's labs include

technologies such as—client/server, object technology, multimedia, mobile computing and application architecture.

Marketing is done principally by the senior staff (executive officers, vice presidents, senior principals and principals) and by a small number of full-time salespersons for each large market.

In the government markets, AMS replies selectively to requests for proposals, concentrating on those closely related to previous work done for the same or similar customers.

3. Scope of Current Systems Integration Related Activities

AMS has supplied complex systems solutions for 41 of the 50 largest U.S. banks; all top ten retail banks; four of the top five Canadian banks; five of the 10 largest insurance companies; four of the five largest energy firms; 100 federal civilian and defense agencies; more than 50 of the Fortune 100; over 200 state, city and county governments, school districts, colleges and universities; and telecommunications carriers.

- Financial services institutions—AMS provides consulting and systems integration services application solutions and consulting to money center banks, major regional banks, insurance companies and other large financial services firms, specializing in corporate and international banking, consumer credit management, global custody and securities control systems and bank management information systems.

- Federal government agencies—AMS provides consulting, business process re-engineering services, systems

operations and system development and implementation services to civilian and defense agencies and aerospace companies. AMS' work for defense agencies often involves expertise in engineering and logistics.

- State and local governments and education—AMS provides systems consulting, integration services and applications software products to state, county and municipal governments for financial management, revenue management, human resources, social services and public safety functions. The company also markets services and applications software products to universities and colleges.

- Telecommunications firms—AMS provides professional services and strategic application development and implementation services for telecommunications companies, including application systems for order processing, billing, accounts receivable and collections for local exchange and inter-exchange carriers.

- Other—AMS provides various professional and systems integration services for large firms in other industries, including pharmaceuticals and energy.

AMS' services and product revenue is recognized as follows:

- For large professional services contracts, AMS typically contracts for one phase (design, development, or implementation) at a time. No contracts are subject to renegotiation.

  - AMS generally contracts either on the basis of reimbursement of costs plus a fixed fee, a fixed or ceiling price for each

phase, unit rates for time and materials used, or for services sold at unit prices. In most cases, AMS receives monthly or per-deliverable progress payments.

- Most of AMS' revenue is from projects performed under cost-plus contracts, or under fixed- or ceiling-price contracts in which AMS recognizes revenue based on the percent of work completed. Many of AMS' projects require six or more months to complete.

- AMS also offers software assessment as an additional service to its clients.

• Revenue from licenses for off-the-shelf packaged applications, for which delivery has occurred, is recorded at the time the contract is signed, less an amount approximately equal to costs required to complete the contract, which is later recognized on a percent-of-completion basis.

- AMS is committed to IBM's AD/Cycle application development strategy and is working with IBM to develop versions of its applications for IBM's System Application Architecture (SAA).

- AMS has made a major commitment to improving the productivity and quality of its work for clients using its Life-cycle Productivity System (LPS), a proprietary combination of third-party and AMS-developed applications. The LPS methodology covers all the areas that an organization needs to establish business objectives, to identify whether application packages or other reusable applications can meet most objectives and to determine system adaptations to meet specific business and technical needs.

- AMS' CORE 2000 Foundation Software is an integrated suite of reusable building blocks for designing, developing and implementing business systems. CORE 2000 uses leading-edge technologies such as client/server, object technology, advanced user interfaces, distributed data and open systems.

- Software applications available from AMS are presented in Exhibit B.

Financial Services (Banking and Insurance)

AMS provides management consulting and system development services and, as part of those services, also provides several packaged applications to large international banks and to U.S. money center and regional banks and insurance companies. Services and product revenue from this market was $91.5 million in 1994, a 53% increase over $59.9 million in 1993.

• AMS consultants assist in all phases of system planning and project management, including strategic systems planning, business process redesign, business-system concept definition, software evaluation, risk management consulting, credit and behavior scoring model development and implementation, custom system design, system implementation, packaged system customization, operations and efficiency analysis and training documentation.

• In the area of insurance, AMS specializes in operations re-engineering and underwriting systems for life insurers. The firm served as an integrator for Mutual of New York's CLUES expert underwriting system. In addition, AMS worked with Mutual Benefit Life in developing a new business environment.

Exhibit B

AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Credit Management			
CreditLine			
- Automated Credit Application Processing System (ACAPS)	Customer credit application processing system	80	IBM 370, 43XX, 30XX, 93XX
- BureauLink	Credit bureau request processing	95	IBM 370, 43XX, 30XX, 93XX
- Advanced Consumer Lending System (ACLS)	Loan processing system	22	IBM 370, 43XX, 30XX
- Computer Assisted Collection System *Plus* (CACS*Plus*)	Collection management system	190	IBM System 38, 370, 43XX, 30XX, AS/400
- Behavior Scoring	Risk management decision support	1	IBM 370, 43XX, 30XX
- STRATA	Decision management	New	IBM 370, PS/2
Corporate Banking			
Letter of Credit System (LCS)	Letters of credit, reimbursements, Banker's acceptance and purchase order processing	29	IBM 43XX, 30XX
Customer Entry System (CES)	Customer interface to LCS	16	IBM 43XX, 30XX
Collection Processing System System (CPS)	Automation for clean and documentary collections	17	IBM 43XX, 30XX
Secured Electronic Main System (SEMS)	Bank and customer message interface	7	IBM 43XX, 30XX
Incoming Telecommunications Interface	SWIFT, cable/Telex and fax interfaces	16	IBM 43XX, 30XX
AMS TradeLine	Letters of credit and collections processing for international banks	24	IBM 30XX
AMS TradeLine/Client/Server	Graphical user interface to TradeLine	5	OS/2, DOS, Windows

6

Exhibit B (cont.)

AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Investments Industry			
Securities Processing & Trust Accounting System	On-line, realtime global securities settlement and clearance/asset management, cash movement and control system	35+	IBM 370 and above
Securities Lending & Borrowing System	Securities lending and borrowing for debt and equity	(In devel.)	UNIX, client/server
Government Systems			
Federal Financial System (FFS)	Accounting and financial reporting system	26	IBM 3090, 43XX, 30XX, 93XX; DEC VAX
Procurement Desktop (PD)	Electronic office for procurement operations	3	UNIX servers; DOS/ Windows clients
Local Government Financial System (LGFS/ADVANTAGE™)	Accounting, financial and materials management system	130	IBM 3090, ES/9000 Series; DEC VAX
Government Financial System (GFS ADVANTAGE™)	Accounting, financial and materials management system	39	IBM 3090, ES/9000 Series; DEC VAX
OASIS/ADVANTAGE Tax Management System	Property valuation, tax accounting, and management system	28	IBM 3090, ES/9000 Series; DEC VAX
Government Human Resource System (GHRS/ADVANTAGE™)	Human resources and payroll system	41	IBM 3090, ES/9000 Series; DEC VAX
Education Systems			
Local Education Agency Financial System (LEAFS/ADVANTAGE™)	Local school district accounting, financial and materials management system	14	IBM 390, ES/9000 DEC VAX Series
ADVANTAGE Series			
- College and University Financial System	Accounting and financial management system	100	IBM 370/390, ES/9000
- Student Information System	Admissions, financial aid, student records and student accounts receivable system	15	IBM 370/390, ES/9000, UNIX
- Human Resource System	Payroll/personnel, applicant tracking, benefits management	10	IBM 370/390, ES/9000; DEC VAX

(continued)

Exhibit B (cont.)

AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Education Systems			
LEGEND Series			
- Facilities Management System (FMS/LEGEND)	Manages inventory; operates/ maintains facilities; manages design, construction, space, equipment; performs financial/ admin services	1 (New)	IBM 370/390, ES/9000
Telecommunications Industry Systems			
TieLine	Customer contact systems for fixed-wire operators		IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- CAMS	Customer Account Management System	6	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- MPS	Message Processing System	7	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- SOMS	Service Order Management System	2	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- UP	Usage Pricing	New	IBM 370, 43XX, 30XX, MVS/ESA, IMS/DB/DC, UNIX
Mobile2000	Customer management and billing system for wirefree operators	3	IBM 3090, MVS/ESA, DB2, CICS, ES/9000

4. Financial

Fiscal Year End: 12/31/94
1994 Total Company Revenue: $460 M
1994 Worldwide Information Services Revenue: $460M (non captive)
1994 U.S. Systems Integration Revenue: $391 (non captive)*

*INPUT Estimate

AMS' 1994 revenue reached $460.0 million, a 26% increase over 1993 revenue of $364.0 million.

- In the financial services institution market, 1994 services and product revenue increased 53% compared to 1993.

- In the federal government market, 1994 services and product revenue decreased 4%. However, AMS experienced continued success in marketing the Federal Financial System and related services.

- In the state and local government and education market, 1994 services and product revenue increased by 24% over

1993. Increases were spread across the entire client base in the market, excluding the higher education clients.

- In the telecommunications market, services and product revenue increased 55% over 1993.

- Services and product revenue from other corporate clients increased 5% from 1993, despite the reductions in revenues from IBM.

5. Systems Integration Strategy

AMS' overall strategy for the 1990s includes:

- Specializing by industry, business function and client size

- Managing and building on long-standing relationships with major clients in vertical markets

- Acting as a full-service business partner for clients in AMS' vertical markets

- Taking responsibility for results—not simply providing resources

- Forming alliances and partnerships with clients and other firms

AMS is targeting 20% annual growth in service and products revenue for the 1990s. AMS' growth strategy includes:

- Selling existing capabilities within existing vertical market segments

- Growth within existing vertical markets by expanding into additional market niches

- Pursuit of selected opportunities that require combined expertise from two (or more) vertical market segments.

- Periodically starting into a new vertical market segment as appropriate (e.g., the pharmaceutical industry).

In the area of AMS' client/server technology focus, the company's strategy is to:

- Deliver client/server solutions with integration to legacy systems

- Design advanced user interfaces through user-centered methodologies

- Use object-oriented techniques through tools and analysis

- Create open systems by capitalizing on standards

- AMS' strategy for the finance industry is to accelerate growth in the areas of risk management (consumer and corporate), customer relationship enhancements, technology (client/server, imaging) and business transformation.

6. Competitive Position

Major competitors by markets served include the following:

- Financial services institutions—ALLTEL Information Services (formerly Systematics), Fair Isaac and Shaw

- Federal government agencies—"Big 6" accounting firms and various systems integrators

- State and local government/local education agencies—KPMG, D&B Software and Systems & Computer Technology

- Colleges and universities—Systems & Computer Technology, Oracle, PeopleSoft, the "Big 6" and IBM

- Telecommunications—Cincinnati Bell Information Systems and Andersen Consulting

- Energy clients—"Big 6" accounting firms

7. Recent Key Contracts

The following describes various customer contracts in the vertical markets that AMS serves:

Financial Services (Banking and Insurance)

Key AMS clients in the financial services area include Bank of America, Wells Fargo Bank, Bayerische Vereinsbank, American Express, AT&T, Banc One, Bank of Montreal, Barclays Bank, Barnetts Bank and Citibank.

In the area of insurance, AMS served as an integrator for Mutual of New York's CLUES expert underwriting system. In addition, AMS worked with Mutual Benefit Life in developing a new business environment.

- AMS has been exclusively designated a "preferred integration partner" by the Lincoln National Corporation, a vendor of expert underwriting systems to the life insurance industry.

- Other clients include Provident Insurance, Equitable, PNC, KeyCorp and Aetna.

- AMS has an alliance with AICorp, a provider of expert system development software, to provide training and consulting services to insurance companies.

Federal Government

AMS provides professional services to all major Army, Navy, Air Force and Marine Corps organizations in the areas of information systems and technology applications.

- AMS also provides services in support of logistics and maintenance engineering; activity-based costing; industrial operations improvements and business process re-engineering; total quality management implementation services; and environmental systems.

- Information systems work includes consulting and systems development for executive decision support systems, strategic systems planning, EDP acquisitions, support, quality assurance and independent verification and validation (IV&V) and life-cycle management documentation support. Projects include distributed processing, information engineering/information systems architectures, the installation of LANs and UNIX-based systems and the application of document imaging and expert systems.

- In the field of engineering and logistics support for Navy surface ships, key projects include—devising new maintenance procedures based on condition of equipment, employing automated systems for test and diagnostic functions and analyzing trade-offs between maintenance priorities and available resources.

- AMS is also involved in projects to improve headquarters and field logistics management functions, including the development of decision models and performance standards for maintenance, supply and other logistics elements.

- AMS has provided technical, functional, engineering and management support to help re-engineer the business processes of

the U.S. Navy's shipyards. AMS is now designing, developing and implementing the re-engineered business processes and the technology infrastructure to support those processes.

- Under a subcontract with Science Applications International, AMS is providing systems engineering technical assistance to the Center for Information Management in the Defense Information Systems Agency office. The five-year contract has a potential value to AMS of between $12 million and $15 million.

- AMS is providing strategic, operational and systems consulting for depot operations. AMS has won $44 million in contracts for naval depots through 1997 and is targeting other DoD services through the Joint Logistics Systems Command. AMS is also expanding maintenance consulting into the nuclear utilities market, with four under contract.

- AMS is providing a range of information consulting and financial systems to national intelligence agencies.

- AMS is providing strategic, technical and systems consulting for Navy surface ships and has won a $57 million contract through 1997.

- AMS is expanding into closely related industries, providing facilities management systems to utilities and universities to improve plant maintenance.

Civilian Agencies—AMS currently provides professional services to over two dozen federal civilian agencies under various basic ordering agreements, requirements-type contracts and ADP schedules.

- Services span the full system development life cycle. from systems planning and technology assessment through requirements analysis, design. development and implementation. AMS also performs general management consulting assignments, provides quality improvement consulting and training and furnishes independent validation and verification services.

- Advanced methodologies applied for civilian agencies have included Joint Application Design (JAD) techniques, information engineering, business process redesign and computer-assisted software engineering.

- Key technology initiatives include distributed, client/server financial management systems, client/server administrative systems; and re-engineering of business processes and workflows, including integration of image technology in administrative and programmatic workflows and client/server tools for performance measurement and cost management.

- Areas of specialization include office automation, telecommunications, financial accounting, payroll/personnel, regulatory operations and administrative applications.

- Key civilian agency clients include the Treasury: IRS and Customs; Veteran Affairs; Interior: Geological Survey, Minerals Management; Environmental Protection Agency; Education; Housing and Urban Development.

AMS' Federal Financial System (FFS), a large-scale financial accounting application for federal agencies, has been implemented in 26 agencies.

• New FFS clients include the Department of Housing and Urban Development (HUD), the Uniformed Services University of the Health Services and the Bureau of Alcohol, Tobacco and Firearms.

AMS provides systems operations services to several agencies, including developing and operating systems customized to federal agency requirements. AMS also participates in the GSA teleprocessing services program, under which agencies can purchase processing services from information services vendors.

State and Local Government/Education

Ongoing projects in this market include 17 statewide financial systems, 41 state agency systems, 6 of the top 19 cities, 15 of the top 50 counties, 11 Canadian Federal Ministries, 8 of the top 100 large school districts and 15 of the top 150 major universities.

Services and products are marketed to state and local governments and local education agencies for financial, human resources and tax management applications.

• In November 1993, AMS was awarded a $5.5 million systems integration contract to implement an advanced automated procurement system for Government Services Canada.

• In October 1993, AMS was awarded a $4.9 million consulting and systems development contract by the Minnesota Pollution Control Agency. The new management system will support all major environmental protection programs operated by the state.

• Other key contract awards received during 1993 and 1994 include the States of California and Mississippi for tax revenue systems and Connecticut and Pennsylvania for child support enforcement systems.

• During 1992, AMS received key contract awards from Wisconsin, Utah, Louisiana, Minnesota, Massachusetts, Arizona, California, Pennsylvania, Virginia, Sacramento and Westchester County.

Systems for colleges and universities focus on financial, human resource, student and alumni and fund-raising information management systems.

• AMS has received key contract awards from Columbia University, University of Texas at Galveston, University of Hawaii, Columbia University, Fresno Schools, Salem Keizer Schools, Los Angeles Unified Schools and Cherry Creek Schools.

Telecommunications

AMS has implemented versions of its TieLine applications for companies such as Bell Atlantic, BellSouth, Contel, Pacific Telecom, Sprint, ALLTEL, Stentor (formerly Telecom Canada) and Alberta Government Telephones.

Mobile2000 is a customer management and billing system for the cellular telephone industry, jointly developed by AMS and NYNEX Mobile Communications.

• AMS markets and supports Mobile2000 worldwide and provides professional consulting services.

• AMS is implementing Info-2000, a comprehensive customer management and billing system, at NYNEX Mobile. The system is the foundation for Mobile2000.

- In July 1994, AMS was awarded a $20 million contract by Telia Mobitel, a leading Swedish cellular carrier, to develop a customer care and billing system based on Mobile2000. One implemented, the system will support more than one million subscribers.

- Other mobile communications clients include SNET Cellular, AirTouch Cellular, TU-KA, Telia Mobitel (Sweden), Tokyo Digital Phone (Japan) and Telecel (Portugal).

Other Market Areas

AMS has completed over 30 document-imaging projects, including systems integration and studies. AMS has implemented large-scale imaging solutions using hardware supplied by IBM, FileNet, LaserData and other vendors. These projects have been performed for government agencies, financial services and insurance firms, public utilities, hospitals and transportation companies.

Since 1972, AMS has provided processing services to dozens of trade associations and membership organizations, including the Association of Flight Attendants, the National Alliance of Business and the AARP. Membership accounting, billing, payroll and related services are provided via the Arlington data center.

Through AMS Training Services and AMS Courseware Developers, AMS provides consulting and training services to Fortune 500/50 industrial companies, banks and insurance companies and government agencies.

8. INPUT Assessment

The core strengths of AMS' business include:

- Experience of large complex projects

- Providing business/technology analysis and consulting

- Wide range of systems integration services

- Developing reusable applications for business functions

- Managing long-term client relationships

AMS' challenge is to maintain/improve profit margins in a market that is rapidly becoming more competitive.
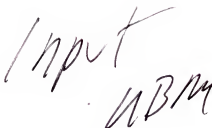
Company Profile

May 1995

Logica Inc.

Name: **William Engel**
Title: **President & CEO**
32 Hartwell Avenue
Lexington, MA 02173-3103
Phone: **(617) 476-8000**
Fax: **(617) 476-8010**

*Input
UBM*

The following profile outlines the products, services and support offered by Logica Inc. to their clients for systems integration services.

1. Description of Principal Business

Logica Inc. provides systems integration, consulting and application development professional services and software products primarily to banks and financial services firms, utilities, information/communication companies and multimedia content and service providers.

Logica Inc. is a subsidiary of Logica plc. Logica plc., with revenues of approximately $350 million, has 3,400 employees and offices in 17 countries worldwide.

2. Organization

Logica Inc. is organized along lines of business and includes the following units:

- The Banking and Finance Group is responsible for products and services to the banking and financial services markets.

- The Applied Technology Group applies and integrates multiple technologies to build complex systems and platforms. The group focuses on key strategic technologies including multimedia, on-line transaction processing, voice, client/server, messaging and middleware,

platform development and vendor product development.

- The Interactive Multimedia Group was formed to define and solve business problems associated with emerging innovative applications. The group focuses on the application of advanced digital media technologies to information dissemination, presentation and communication.

- The Synercom Division, based in Houston (TX), was formed with the acquisition of Synercom Technology. It provides client/server systems for the utilities industry.

Logica Inc. is headquartered in Lexington (MA), and has offices in Dallas and Houston (TX), Ft. Lauderdale (FL), Los Angeles and San Francisco (CA), New York (NY), Williamsburg (VA) and Toronto (Ontario, Canada).

3. Scope of Systems Integration Related Activities

Logica Inc. has custom applications development, consulting and systems integration expertise in the areas of banking, financial services, utilities, information/communications and interactive multimedia.

Logica Inc.'s software products are generally provided to clients as part of a professional services/systems integration project and generally support financial and/or network-related applications.

- Bank Electronic Support System (BESS) is a Tandem-based communications and fund transfer and payments system for regional and international banks. Thirty of the top 100 North American banks and 45 banks worldwide use BESS.

- FASTWIRE is a DEC-based product designed to automate message switching, funds transfer or wireroom operations of financial institutions.

- Logica Transaction Director (LTD) is messaging middleware that links hardware (hosts, terminals, intelligent network sites, LANs and printers) and software from diverse vendors into a single network. LTD, which is implemented on Tandem NonStop computers, can function as a gateway system, a connectivity platform, a message switch or a backbone network.

- HotScan enables banks to automatically check payments and messages against a file of blocked or frozen accounts while maintaining continual transaction processing. HotScan is fully integrated with BESS.

- ComplyWire is an anti-money laundering funds transfer record-keeping solution for banks worldwide.

In October 1994, Logica announced its Xchange program—its strategic plan for a next generation of messaging and payments products and the banking industry's first funds transfer system based on industry standard open client/server architecture.

- As part of the Xchange program, Logica has selected Tandem Computers as the preferred vendor and will use Tandem's UNIX systems technology.

- The Xchange family of messaging and payments solutions will be initially comprised of three modules— DataXchange, MessageXchange and FundsXchange—to be introduced over the next three years.

Logica's retail banking consultants have successfully completed more than 300 retail core systems projects for banks using the Hogan Integrated Banking Application (IBA).

- The company's focus is to implement custom-fit banking systems that meet the business and operational needs of banks. Logica acts as a partner to its clients in the implementation and upgrade of systems.

- Logica is a leading independent implementor for Hogan software worldwide. Based on an implementation methodology specifically developed for Hogan/IBA, Logica's Hogan projects have been staffed from the company's designated Hogan competency center in Los Angeles (CA).

- Hogan-related products/services provided by Logica include:

  - Logica Conversion System is a program used to convert existing databases to Hogan/IBM Integrated Banking Applications for deposits, loans, RPM and customer information system databases.

  - Logica Integrity System software maintains data integrity within a Customer Information System and between product databases.

  - Source Control Workbench is a project control tool for source software changes in the development environment.

  - IrisTool is a set of integrity tools for converting to and running Hogan's integrated loan product to ensure the accuracy of the loans database.

  - Logica offers various Hogan training services, including hands-on training, intensive training, user training and Mastering Hogan Series (MHS)—a complete series of self-directed technical training courses for the new and experienced programmer/analyst desiring to become productive in the Hogan/IBM development environment.

Logica Inc.'s Banking Decision Systems division markets the following asset/liability management products for IBM and compatible mainframes, IBM RS/6000, IBM PS/2 or compatibles, DEC VAX and UNIX platforms:

- BankMaster Plus is a decision support product for forecasting and reporting financial information, asset and liability management and profit planning. More than 100 financial institutions in the U.S., Canada and Europe use BankMaster Plus.

- PathMaster is a specialized application derived from BankMaster Plus that extracts, collects and loads data from multiple databases into decision support systems for direct access and analysis.

Logica Inc. offers the following commercial lending software products:

- Loan Administrator [R]—A niche portfolio system for larger banks and a commercial loan solution for smaller and community banks.

- Loan Syndicator [R]—A departmental lending system for larger banks, and a commercial loan solution in mid-sized or international banks.

As a result of the acquisition of the Software Division of Synercom Technology, Logica Inc. offers the following products:

- WMIS—A full-function, integrated client/server software environment that facilitates the management of utilities construction, maintenance and operations work requests from initiation through to closing. The software is installed at Entergy, Hawaiian Electric, Illinois Power, TU Electric and other major electric and gas utilities companies.

- The INFORMAP family of spatial information management software—Combines spatial, graphic and associated attribute data in an integrated spatial database for automated mapping and geographic information system applications.

Logica Inc. sells its products and services in North America through a direct sales force operating out of offices in Lexington (MA), Dallas and Houston (TX), Ft. Lauderdale (FL), Los Angeles and San Francisco (CA), New York City, Williamsburg (VA) and Toronto (Ontario, Canada).

In addition to its direct sales activities, Logica has various marketing agreements with other vendors.

4. Financial

|	
Fiscal Year End:	6/30/94
1994 Total Revenue:	$60 M
1994 Information Services Revenue:	$60 M (non captive)
1994 Systems Integration Revenue:	$39 M
(non captive)*	

INPUT Estimate

Logica Inc.'s fiscal 1994 revenue is estimated at $60 million, a 20% increase over fiscal 1993 revenue of $50 million.

Approximately 64% of Logica's revenue is derived from systems integration services,

23% from consulting and systems development professional services and 13% from software products.

Mix of Services

Software Products 13%

Consulting 23%

Systems Integration 64%
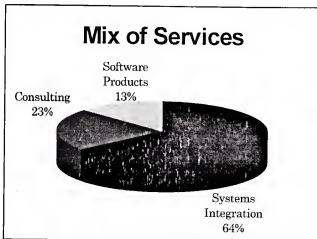
INPUT estimates approximately 90% of Logica Inc.'s fiscal 1994 revenue was derived from North America and 10% from international sources.

5. Company Strategy

Logica Inc.'s strategy is to focus on business areas where Logica possesses differentiation and leadership credentials—banking, financial services and interactive multimedia. Partnerships and alliances will be key in developing opportunities in these selected markets.

Technologically, the company focuses on the areas of multimedia, on-line transaction processing, voice, client/server and messaging middleware.

6. Competitive Position

Logica's capabilities include multi-industry knowledge and focus. The company has positioned itself to address business problems by delivering in-depth technical solutions, products and services.

Logica perceives its major competition to be large consulting firms, such as Andersen

Consulting, Electronic Data Systems (EDS) and Computer Sciences Corporation (CSC).

Other competitors include in-house developers and systems integrators (SI). Logica places emphasis on product development. Many in-house developers, on the other hand, focus on maintenance rather than product development. Smaller SI vendors are not always able to provide the full range of services that Logica offers.

7. Recent Key Contracts

Examples of projects for the financial services community include the following:

- Logica upgraded the order processing system for Merrill Lynch by linking all of Lynch's branch locations to a central system that connected the brokerage house to all major exchanges. The system gives the firm 24-hour service, seven days a week.

- For a major mutual funds company, Logica helped streamline customer service operations by providing connections from existing systems to new applications using a client/server architecture and a single-point access to all customer and corporate plan information.

- Using BESS as its core, Logica built the world's largest international banking network for Bank of Tokyo, designed for multibank, multioffice and multicurrency processing. The network decentralized Bank of Tokyo's operations and enables branches and correspondents to send messages directly without first routing them through headquarters.

- For Japan Travel, Logica used client/server technology to provide a single front-end gateway that enabled the agency to interconnect all of its critical business systems and connect outside services. Terminals in the company's 300 branch offices were replaced with workstations connected to home office mainframes via a wide-area network.

Examples of projects for the telecommunications/communications and other industries include the following:

- Logica Inc. worked jointly with Motorola and Tandem Computers to develop the EMBARC (Electronic Mail Broadcast to a Roaming Computer) Switch, the backbone of an advanced wireless messaging system. The switch allows EMBARC to interconnect with public and private E-mail systems, store messages and sort and deliver wireless E-mail and business information.

- For Broadcast Television Network, Logica provided a number of systems to control television game shows, present questions and answers to the host, cue the still pictures and video tape recorders for visual questions and drive the graphics displays.

- For a major broadcasting company's image library, Logica provided a video image management system called Gallery 2000 to store, retrieve and manage its stock of images. The system uses optical disc storage technology and a database system for tracking the images' content and location.

- For a major telecommunications carrier, Logica is developing the core software infrastructure for an interactive TV system. In conjunction with advanced video and computing hardware, the software will be the platform on which a

spectrum of interactive and multimedia services will be provided by the carrier.

- In February 1994, Logica was selected as a Vendor on Premise (VOP) by the IBM personal systems programming center in Boca Raton (FL). Logica is providing IBM with technical expertise related to the support and development of OS/2.

8. INPUT Assessment

Logica Inc.'s strengths include:

- Industry expertise coupled with technological expertise and project management skills

- Focus on complex technology problems with vertical industries

Challenges include:

- Being responsive to market growth

- Investing in resources to facilitate growth

- Attaining revenue growth of 20% to 30% over the next four years

Parent Company

Logica plc
68 Newman Street
London, W1A 4SE
United Kingdom
Phone: +44 171 637 9111
Fax: +44 171 817 7006

Andersen Consulting

Name: George T. Shaheen
Title: Managing Partner
69 West Washington Street
Chicago, IL 60602
Phone: (312) 372-7100
Fax: (312) 507-2548

The following profile outlines the products, services and support offered by Andersen Consulting to its clients for systems integration and related services.

1. Description of Principal Business

Andersen Consulting is a global management and technology consulting organization that offers a range of professional, systems integration and outsourcing services.

Andersen delivers its management and consulting services through its industry practices, which include Process/Energy, Industrial Products, Consumer Products, Communications (formerly the Telecom Industry Group), Government, Financial Services, Healthcare and Utilities.

Andersen has four competencies—Process, Change Management, Strategic Services and Technology—to offer solutions that combine services ranging from reengineering to business process management.

2. Organization

Andersen Consulting currently serves clients through 152 offices in 47 countries, including 71 offices in the Americas, 63 offices in Europe/Middle East/Africa/India (EMEAI) and 18 offices in the Asia/Pacific region.

Andersen also has a Quality Leadership Council to help oversee quality initiatives worldwide and a Global Management Council, whose mission is to analyze policy issues, review the organization's strategic direction, and ensure that Andersen Consulting's investments are consistent with that strategic direction.

Jack Wilson, Managing Partner, Industry Markets and Packaged Knowledge

Andersen Consulting's primary distribution channels are its industries, which are headed by Jack Wilson. He ensures that Andersen Consulting targets the appropriate industries over the long term, invests dollars accordingly and builds experts who can deliver services for industries ranging from industrial products to utilities.

The six global industry managing partners reporting to Jack Wilson include:

- Communications—Al Burgess (Atlanta)

- Financial Services—John Skerritt (New York)

  - Financial Markets—Aram Shishmanian (London)
  - Insurance—Dave Hoffman (Chicago)
  - Retail Financial Services—John Skerritt (New York)

- Government—David Hunter (Sydney)

- Healthcare—David Rey (San Francisco)

- Products—Pete Peterson (Chicago)

  - Consumer Products—Steve Johnson (Chicago)
  - Industrial Products—Carl Kilmer (Boston)
  - Process/Energy—David Crow (Atlanta)

- Utilities—Bob Anclien (Atlanta)

Vernon Ellis, Managing Partner, EMEAI
John Kelly, Managing Partner, Americas
Tom McCarty, Managing Partner, Asia/Pacific

Although Andersen Consulting goes to market through its industries, the company also needs to ensure that it delivers consistent, high-quality service worldwide while meeting the needs of clients locally. Therefore, Andersen Consulting has managing partners in charge of its three geographic areas to ensure that its 152 offices in 47 countries are meeting client needs unique to their local markets.

Keith Burgess, Managing Partner, Business Integration and Process Competence

Keith Burgess is in charge of Andersen Consulting's competencies and service offerings—Change Management, Process, Strategic Services, Technology and Business Process Management service offerings. Mr. Burgess examines all of Andersen's services, and ensures that the company provides what clients want and that the right people are in place to direct those competencies and service offerings. In addition, he invests dollars and builds expertise across competencies and service offerings to ensure business integration.

Managing partners reporting to Mr. Burgess include:

- Change Management—Terry Neill (London)

- Process—Barry Patmore (Los Angeles)

- Strategic Services—Peter Fuchs (London)

- Technology—Ed Schreck (Chicago)

- Business Process Management—Joellin Comerford (New York)

Jon Conahan, Managing Partner, Practice Strategy

Jon Conahan is George Shaheen's point person for formulating and executing Andersen Consulting's strategic direction. Andersen periodically reevaluates its lines of business and its clients needs through initiatives such as Horizon 2000, an initiative undertaken in 1991 that resulted in the creation of Andersen Consulting's vision

statement, its Global Management Council and a host of other changes designed to keep the firm attuned to its market. Mr. Conahan is in charge of crystallizing strategy and communicating it to the partners.

Mike McGrath, Managing Partner, Practice Process and Quality

Mike McGrath chairs Andersen Consulting's Quality Management Council. Essentially, his job is to ensure that Andersen Consulting always builds quality into its work, that methodologies are sound and that the company has a system for total quality improvement. Andersen's chief information officer, Charlie Paulk (Chicago) reports to Mr. McGrath.

Other Senior Executives

Carol Meyer directs internal human resources policies. Bob Prince directs partnership matters. John Smith (Chicago) directs internal training and reports to Bob Prince. Jim Murphy directs all of Andersen Consulting's marketing efforts and reports to George Shaheen.

Business Integration Centers

Andersen Consulting's Business Integration Centers (BICs) are specifically designed working environments where senior executives can explore and shape solutions for their companies. They are as follows:

Located in Chicago, SMART STORE, an evolving research and development center, demonstrates how food and consumer packaged goods retailers, manufacturers, wholesalers and brokers need to work together to focus their strategies on the ultimate source of power—the consumer.

- The latest rendition of SMART STORE—SMART STORE Act II—is built around six strategies that help retailers,

manufacturers and wholesalers meet the needs of the consumers and break away from the current problem of marketplace saturation—too many stores, too many products and redundant distribution processes.

- In Windsor, Bershire (England), SMART STORE Europe is Andersen Consulting's evolving research and development center, dedicated to European retailers, distributors and manufacturers. The facility makes use of an extensive demonstration area to bring to life a range of industry challenges and a model of future best practices in retailing, distribution and manufacturing. It also shows how the integration of business processes, people and technology can support a strategy that delivers greater value and choice to the consumer.

- In Lidcombe, New South Wales (Australia), SMART STORE Asia-Pacific offers the newest approaches to manufacturing, wholesaling and retailing for food and packaged goods industry organizations in the Asia-Pacific region. As an evolving research and development center, SMART STORE Asia-Pacific demonstrates how packaged goods retailers and manufacturers can reengineer their businesses around the needs and wants of consumers, thus adding value to the consumer shopping experience.

In Atlanta, Logistics 20•20 focuses on the concept of Demand Chain Management, highlighting the impact of logistics on components of the demand chain. Visitors see the entire breadth of the Business Integration model in action. The scope of a visit can be as broad as strategies for the entire demand chain, or as focused as radio frequency technologies for the warehouse. By being product-neutral, Logistics 20•20 allows companies from a variety of industries to see these concepts applied to their situations.

Also in Atlanta, Process 20•20™ is a forum for demonstrating and discussing best practices and new ideas in the process manufacturing industry. The center allows an opportunity for executives to explore specific issues related to their businesses in a workshop setting, ranging from global integrated demand chains and enterprise management to product and process development and managing the reengineering journey. At Process 20•20, clients discuss what changes—in strategies, business processes, people and technology—would improve their ability to succeed as well as how to implement those changes.

In Dallas, the Health Strategy Center, a vision of tomorrow's health services community, shows how new approaches to care delivery and management can help enhance quality and contain costs. Using realistic recreations of various health care organizations, Andersen Consulting demonstrates how new business processes and information technology can transform health care and related organizations. The center also addresses cooperative strategies for the entire health services industry—providers, intermediaries, suppliers, buyers and policymakers.

In Chicago, The Retail Place focuses on retailers' needs to differentiate themselves from competitors by defining who they are, to whom they market and through which channels they reach that market. Through tailored workshops, executives focus on those capabilities that both satisfy their customers and reduce costs.

Opened in Chicago in June 1995, ENTERPRISE 2020 is dedicated to helping manufacturers of complex products.

• ENTERPRISE 2020 accommodates the specific needs of the automotive and electronics industries, as well as the aerospace and defense, industrial equipment and consumer durables industries. The experience helps companies understand the market forces that impact their business, identify solutions and visualize the specific ways that their organizations can effectively respond.

• The center is equipped to address a range of isssues, from the boardroom to the shop floor. ENTERPRISE 2020 provides visitors with a better understanding of how they might change to improve their performance both today and in the future.

Citizenlink, operated by Andersen Consulting's Government practice, is a portable public services integration center that focuses on best practices and public service enterprise transformation.

3. Scope of Current Systems Integration and Related Activities

Andersen Consulting provides a range of professional and systems integration services through a combination of its four competencies—Strategic Services, Change Management, Process and Technology.

Developing full services, primarily from within, is key to Andersen Consulting's approach of partnering—delivering not only advice, but also implementation. On client projects, the competency specialists remain involved throughout the entire client relationship. They work collaboratively and iteratively, adjusting as they go. Work is not handed off from one competency to the next.

Strategic Services—Andersen Consulting believes that transformational change is imperative for survival. Andersen Consulting's Strategic Services practice is focused on helping clients chose an appropriate strategic direction and developing

and successfully executing a strategic implementation plan.

- Deep industry knowledge, world-class organizational skills and ongoing investments in building knowledge capital enables the Strategic Services practice to devise innovative and break-out-of-the-pack strategies and implementation plans for companies.

- The Strategic Services practice works with leading companies around the world, academic and industry associations and other nonprofit organizations. This practice:

  - Has grown sixfold since 1989
  - Has about 900 professionals working around the globe
  - Is among the top five or six largest strategy practices in the world, and one of the fastest growing
  - Has Logistics and Information & Technology Strategy practices that are leaders in their fields
  - Has ongoing research programs in enterprise transformation; supply chain management; banking; packaged goods and numerous other industries; and information and technology strategy

The *Change Management* competency focuses on the people and organizational aspects of change to convert client strategies into improved day-to-day performance and behavior of their people.

- Andersen Consulting's Change Management team translates change aspirations at the executive level into new understanding, skills and behavior through all levels of an organization.

- Andersen Consulting has embedded Change Management into its business integration strategy by forging stronger links with the other competencies and by becoming an integral part of industry marketing.

The *Process* competency's mission is to apply process design principles, best practices and information technology to design and implementation processes to achieve outcomes that deliver value. The magnitude of process change can range from streamlining to business reengineering to enterprise transformation. Targeted processes include:

- Developing products and services—concurrent, fast-to-market design/engineering

- Generating demand—achieving customer satisfaction with micromarketing, value-added services, market intelligence

- Producing and delivering products and services—reengineering of supply chains, order fulfillment and integration of design and manufacturing

- Managing the enterprise—reengineering support processes such as financial, human resources and information management to make them more responsive to internal customers' needs.

The *Technology* competency is responsible for delivering technology expertise via systems integration to assist clients in expanding business opportunities, creating new markets, as well as rejuvenating existing products.

- Systems integration projects may require the design and installation of systems using custom-designed or packaged software, expertise in project management and change management computer-based training.

- The Knowledge Xchange™ knowledge management system is a firmwide communications system that allows

Andersen Consulting consultants from around the world to trade ideas and exchange knowledge and experience.

• The company is committed to offering client/server and object technology solutions for its clients.

Business Process Management represents Andersen Consulting's outsourcing services practice, which targets outsourcing of client/server-based information technology operations and other business processes, such as logistics and customer service.

• The Business Process Management practice, with more than 3,500 professionals and 155 clients worldwide, generated an estimated $320 million in revenue during 1994, growing 30% annually for the past three years. It is expected that the practice, which has a $1 billion portfolio, will reach an estimated $450 million in revenue in 1995.

• In March 1995, Andersen Consulting signed a letter of intent to form an alliance with GE Capital to pursue opportunities in the U.S. mainframe outsourcing market. Under the alliance, Andersen Consulting will help companies manage and continuously improve their entire IT function while GE Capital provides mainframe services.

To ensure a seamless approach, experts from various competencies/service offerings deliver solutions through specific industries.

• Through Andersen Consulting's Industry Markets and Packaged Knowledge area, the firm offers its FOUNDATION suite of

client/server and host-based methodologies, application development tools and enablement services to help organizations build high-end departmental and enterprise-wide client/server systems.

• As part of Andersen Consulting, FOUNDATION delivers market-enabled versions of the firm's proven methodology and development tools, which are based on the experience and knowledge gained on thousands of development projects each year.

• Andersen Consulting's advanced development initiative, Project Eagle, provides a new capability for software development based on various advanced concepts, including distributed object computing, Integrated Performance Support, advanced usability and tailorability.

The following discussion summarizes Andersen Consulting's services by industry practice.

Products Industry Practice

The Products Industry practice is composed of three major segments—Consumer, Industrial and Process/Energy. Overall revenues reached $1.38 billion in 1994, a 14% increase over $1.2 billion in 1993.

The Consumer Products segment achieved a 22% revenue increase in 1994 to $752 million. Business Integration Centers continue to help stimulate strong sales in the food and consumer packaged goods segments, as well as retail and wholesale distribution. The Retail industry practice works with more than 450 clients worldwide, representing the apparel manufacturing, general retail and wholesale distribution industries.

Project examples in this segment include:

- Providing consulting and systems integration services to implement an advanced merchandise management system for ShopKo Stores Inc.

- Providing outsourcing services in support of Filene's Basement (an apparel chain) financial, distribution and merchandising applications.

- In the food segment, providing a range of transformational work for Dial (U.S.), ICA (Sweden), Heinz and Nestle.

- Revamping the financial planning system for Pepsi-Cola International's Latin America Division.

- In the pharmaceutical market, a range of transformational work for Hoechst, Pharmacia, Sandoz and Pfizer.

- In the transportation and travel services segment, Andersen Consulting continues to leverage its work in Passenger Revenue Accounting (PRA), a system originally developed at Northwest Airlines. By the end of 1994, Andersen was providing PRA to four major airlines.

- For Delta Airlines, providing a range of services, including restructuring and automating Delta's entire finance department.

- In the railroad segment, a range of work for The Atchison,Topeka and Santa Fe Railway Company, JR Tokai and British Rail Board.

The Industrial Products segment recorded 1994 revenue of $318 million, a 4% increase over 1993, due to the resurgence of the automotive market, continued expansion in the electronics sector and general improvement in economic conditions. This is balanced by the sharp decline in investments of this nature in the aerospace and defense sector. Project examples in this segment include:

- In the automotive industry, key engagements with industry leaders such as Chrysler, Ford, Nissan, Volkswagen, Harley-Davidson Motor Company and Fiat

- In the electronics industry, key engagements with companies including Motorola, Microsoft, Hewlett-Packard, Samsung Electronics, NEC Technologies, Alcatel, Olivetti, Sun Microsystems and Apple Computer

- In the industrial equipment sector, key engagements with companies such as Caterpillar and Mitsubishi Caterpillar Forklift

- In the consumer durables sector, key engagements with companies such as Johnson Matthey, plc, Stanley Works Inc., and UCAR Carbon Company

- In the aerospace and defense sector, key engagements with companies such as The Boeing Company and McDonnell Douglas

The Process/Energy segment achieved a 7% increase in revenue during 1994 to $310 million. Project examples in this segment include the following:

- Reengineering services, software configuration, development and implementation services for Conoco's core business systems

- A five-year, $89 million contract with British Petroleum Exploration Europe to manage British Petroleum's financial accounting services

- Providing application maintenance and development services in support of a new client/server environment for Freeport-McMoRan

- Managing IT applications, including financial and administrative systems and equipment and products operation systems, for Halliburton Energy Systems as part of a 10-year, $500 million contract

- Partnering with SAP AG and several oil companies for the redevelopment of SAP's successful R/2 (mainframe) downstream IS-Oil product onto an R/3 (client/server) platform. Active participants include Chevron, Crown Central Petroleum, Elf, Mobile, Petrofina, Star Enterprise, Sunoco Canada and Texaco

- Various projects for Royal Dutch Shell, Italy's AGIP and Spain's Petrogal

Financial Services

The Financial Services practice—comprising Retail Financial Services, Financial Markets and Insurance—generated 1994 revenue of $974 million, a 36% increase over 1993.

The Retail Financial Services segment generated revenue of $434 million in 1994, up 44% over 1993. Project examples include:

- Providing Postbanken (Norway) with the FOUNDATION client/server application development toolset to build a new customer service system

- Providing custom programming and support services for SEI Corporation's TRUST 3000 product

- Working with Caja Espana (Spain) to develop retail financial service extensions to FOUNDATION

- Implementing the TRIUMPH card processing system (developed with Banc One) for Barclaycard (U.K.) and GZS (Germany)

- Providing transformation change/strategic services to Chemical Bank, Wachovia, Bank of America, Great Western Bank and First Bank System

The Financial Services practice reported 1994 revenue of $322 million, a 31% increase over 1993. Much of this segment's work for brokerages and mutual funds calls for reconfiguring the latter's businesses to support global operations.

Projects include providing outsourcing services to run the automated trading floor at the London Stock Exchange. Clients include J.P.Morgan, Capital Group and Northern Trust Corporation.

The Insurance segment contributed $218 million in revenue during 1994, up 29% from 1993. Andersen Consulting is working with more than half of the top 50 insurance companies in the world. Projects include:

- Reengineering of key claims processes for Fortis, Inc.

- Development and implementation of new systems, products and organizational structures for Eagle Star (U.K.)

- Building a mission-critical life insurance new business and contract administration system with USAA

- Reengineering the customer service processes at John Hancock

- Support client servicing and risk management applications for Marsh & McLennan

- Assisting in the reengineering of the underwriting processes for Allstate

- Effecting wide-scale transformational change for AMP of Australia

Communications

The Communications Industry practice, Andersen Consulting's fastest growing practice area, recorded worldwide 1994 revenue of $364 million, a 52% increase over 1993 revenue of $239 million. With more than 3,000 consultants worldwide, the practice services virtually every major telecommunications carrier, providing a spectrum of services ranging from strategic planning to the implementation of customer contact and network operations systems.

Project examples include the following:

- Serving as systems integrator for the Time Warner Cable Full Service Network, deployed in Orlando in late 1994

- Working with Bell Atlantic to reengineer and redevelop major business processes and systems in both its network and customer contact areas

- A seven-year, $30 million contract with American Mobile Satellite Corp. (AMSC) to develop and operate billing and business information software systems for the satellite-based network AMSC is building for mobile communications

- Working with Belgacom to reengineer its provisioning and customer service processes

- Working with Telstra to reengineer its core systems, including its end-to-end customer contact process

Government

The Government Industry practice increased its revenues by 12% during 1994. Andersen Consulting assists government agencies around the world, focusing on several key segments—taxation, human services, public safety, defense, postal services and government finance/administration.

Project examples include the following:

- A five-year outsourcing contract with the Department of Planning and Development for the Government of Victoria (Australia)

- Developing an integrated operational police system (COPS) for Australia's New South Wales Police Service

- Providing reengineering services to taxation agencies in the U.S., New Zealand, Japan, South Korea, Singapore, Puerto Rico and the Philippines

- Reengineering the State of Texas' child welfare tracking system to provide immediate access to a unified database of casework, court records and provider histories

- Providing financial management and procurement-related consulting services to various U.S. government agencies under a contract with the Financial Management Service, a bureau of the Treasury

- Leading an alliance of technology providers to create an object-oriented approach to software development that promotes reusability and easy modification under a $24.5 million project with the U.S. Department of Defense's Advanced Research Project Agency

- Designing and implementing a new Financial Management System for the U.S. Department of Commerce

- Implementing a new statewide computer-aided dispatch system for the California Highway Patrol

Utilities

The Utilities Industry practice, with worldwide revenue of $225 million, provides reengineering expertise to utilities organizations around the world, including strategic services, systems integration, business process management and change management skills. With more than 2,500 consultants worldwide, Andersen Consulting provides utilities expertise in consumer services; energy delivery; energy management, marketing and trading; power generation/production; corporate services; and enterprise transformation/thought leadership.

Project examples include the following:

- Developing a customer information system for Florida Power using Andersen Consulting's FOUNDATION application development tools

- Developing an engineering business change plan for North West Water Engineering (U.K.)

- Developing a customer service system for Northern States Power

Andersen Consulting, in conjunction with Florida Power Corporation, has established SolutionWorks, a joint solutions center that develops and showcases the latest in utilities technology.

Healthcare

The Healthcare Industry practice recorded worldwide 1994 revenue of $97 million, an

18% increase over 1993 revenue of $82 million. With more than 750 health care-specific professionals in the Americas, Europe, Australia and Asia, the practice currently serves more than 250 major clients throughout the world.

The Healthcare Industry practice was granted a $4.3 million research award from the Advanced Technology program at the National Institute of Standards and Technology. This award allows the practice to spearhead a two-year research and development effort for a technical architecture that would enable health care information systems to take advantage of an emerging national information infrastructure.

Contract examples include the following:

- Providing ongoing support, including operation of the production and development environment and a full-time help desk for Health Net's Health Net COMP•24, a new medical management program for workers' compensation

- A three-year extension to continue work with the National Marrow Donor Program, including application support to maintain the Search Tracking and Reporting System

- Developing a regional health information network for Akershus County Health Administration near Oslo (Norway)

4. Education

During 1994, Andersen Consulting invested a total of $205 million (6% of revenue) on education, with a total of nearly 3.4 million training hours, covering 700 central training courses. During the year, there were 7,112 client/server trainees and 843 object technology trainees.

Andersen Consulting has recently initiated the Career Development Model in support of the company's resolution to deliver the full value of business integration.

- This model realigns recruiting, training, education, career development, advancement options, compensation, structures and counseling for Andersen personnel.

- The emphasis on broader, deeper and more focused skills to accommodate business integration has led to hiring of experienced specialists, particularly in strategy and change management.

- Training courses are more focused on real-life integration cases.

- Andersen's emphasis is on the concept of multidisciplinary teams in a true business integration environment developing solutions to complex business cases.

Interactive multimedia technology is being used on a worldwide basis in local offices and in centralized training. For example, the Business Practice Course is an interactive self-study multimedia training product that teaches new Andersen professionals basic functions through a simulated client engagement.

Through Andersen Consulting Education, more than 700 courses are available to each Andersen Consulting consultant. By the time a consultant reaches the associate partner level, he or she will have received more than 1,000 hours of education.

- The Center for Professional Education, located in St. Charles (IL), is the organization's hub for internal training and has more than 135 classrooms accommodating more than 1,800 participants.

- Other worldwide training locations include Melbourne (Australia), Singapore and Veldhoven (the Netherlands).

- Training also takes place in local offices.

5. Financial

Calendar Year End:	12/31/94
1994 Total Company Revenue:	$3.45 B
1994 Worldwide Systems Integration Revenue:	$1.93 B
1994 U.S. Systems Integration Revenue:	$905 M

*INPUT Estimate

Andersen Consulting's 1994 revenues reached $3.45 billion, a 20% increase over 1993 revenue of $2.88 billion.

- The U.S. practice, which generates half of Andersen's revenues, posted revenues of $1.74 billion, a 23% increase over 1993.

- Communications, Andersen Consulting's fastest growing industry practice, grew at 52% to $364 million, up from $239 million for 1993.

- Business reengineering revenues rose 20% in 1994 to $932 million, up from $775 million in 1993 and $700 million in 1992.

- Revenues from client/server engagements rose 31% to $1,933 million, up from $1,470 million in 1993 and $1,080 million in 1992.

- Revenues from object technology engagements reached $78 million in 1994, up 105% from $38 million in 1993.

INPUT estimates that Andersen Consulting's worldwide 1994 revenue was derived approximately as follows:

Systems integration 56%
Professional services 30%
Outsourcing services 9%
Software products........................... 5%
100%

INPUT estimates that approximately 52% of Andersen Consulting's $1.74 billion in U.S. 1994 revenue was derived from systems integration, 33% from professional services, 10% from outsourcing services and 5% from software products.

Andersen Consulting's 1994 geographic source of revenue by industry practice is provided below:

Andersen Consulting
1994 Geographic Source of Revenue by Industry Practice
($ Millions)

Industry Practice	Geographic Region		
	Americas	EMEAI	Asia/Pacific
Products	45%	35%	32%
Financial Services	22%	37%	33%
Communications	13%	5%	15%
Government	10%	10%	11%
Utilities	5%	9%	4%
Health Care	4%	1%	1%
Other	1%	3%	4%
Total Revenue	100%	100%	100%

6. Strategy

Andersen Consulting's vision is "to be the global firm committed to quality by having the best people with knowledge capital, partnering with the best clients to deliver value." As a by-product of this vision, Andersen Consulting emphasizes "partnering" and "delivering value."

- Partnering is part of a trend to "consult with" not "consult to" clients. In order to help a client effect complex change, Andersen Consulting believes that the consultant needs to be far more closely involved with the client. This means building joint teams side by side, transferring knowledge, and assuming an implementation role as well as an advisory role.

- Delivering value, according to Andersen Consulting's 1994 annual report, means an emphasis on linking the results of change initiatives to long-term client success as defined by measurable outcomes, such as increased profitability and shareholder wealth (as opposed to emphasizing the processes and tasks required to deliver a solution). As a consequence, according to Andersen Consulting, "a focus on adding value rules out working on limited projects that may or may not relate to a client's strategic mission. Instead, adding value calls for working with a client as a long-term business partner to genuinely create a far more successful enterprise."

- Also as a consequence, Andersen Consulting tries to apply best thinking, the best talent

and creative pricing solutions (such as value-billing) to meet clients' complex needs. This approach is reflected in its emphasis on packaged knowledge solutions, such as Business Integration Centers, that capture best practices for clients.

- In 1994, Andersen Consulting formalized a value-delivery framework—Quality/Value/Success. According to Andersen Consulting, "this framework provides partners a structured approach to help determine the client's expectations—in terms of specfic delivered results."

Andersen Consulting goes to market via its industry practices, applying in-depth industry knowledge and experience to make the application of its competencies relevant to its clients' specific needs. During 1994, Andersen implemented several key initiatives to strengthen its industry practices.

- The company's reorganization intensifies the focus of all its professionals on delivering value, industry by industry.

- More of Andersen's training is oriented around industry issues and solutions.

- Andersen continues to open new industry-focused Business Integration Centers to help clients visualize how they can change to be more successful.

Andersen Consulting's client service model for delivering solutions is "business integration"—the linkage of core business components. For change to work, it must be in sync with an organization's people, processes, strategy and technology.

Andersen Consulting remains fully committed to the reengineering market, as demonstrated by such initiatives as its internal training workshops and its Value Driven Re/Engineering Workbench, an engagement tool that helps clients combine corporate vision with business processes. The organization estimates that nearly $1 billion of its 1994 revenue was attributed to reengineering work.

Andersen Consulting is committed to meeting the transnational needs of clients, operating as a global partnership through an international network of consultants with national practices in 47 countries.

The organization emphasizes global sharing of best practices through its Knowledge Xchange™ knowledge management system.

7. Competitive Position

Andersen Consulting's major competitors include Electronic Data Systems, Computer Sciences Corporation and SHL Systemhouse.

8. INPUT Assessment

Andersen Consulting's major strengths include:

- Industry vision and skills

- Global presence and network

- Full-services capability, particularly in Change Management

- Business integration vision

- Ability to handle very large, complex projects

Major challenges over the coming year include:

• Continuing to meet the client demand for the many skills required to be a full-services player

• Managing the growth of the global network of 32,000 persons

• Efficiently reusing knowledge capital for multiple clients

Andersen Consulting's North American SAP Business Organization provides resources skilled in implementing SAP AG's R/3 client/server products.

• Andersen Consulting plans to increase its North American staff within the next year by an additional 1,000 consultants trained in the R/3 product and its rapid implementation methodogies. This will bring Andersen Consulting's SAP-dedicated consultants to more than 3,000 worldwide, with approximately 50% based in North America.

• Features of the organization include a certification program, SAP support at solution centers, SAP Industry Centers of Excellence (Oil and Gas—Houston, Electronics—Foster City, CA, Process/Chemical—Cincinnati and Consumer Packaged Goods—Chicago) and professionals with SAP R/3 and business integration skills.

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

December 1995

Arthur D. Little, Inc.

Name:	**Charles R. LaMantia**
Title:	**President & CEO**
Acorn Park,	
Cambridge, MA 02140-2390	
Phone:	**(617) 498-5000**
Fax:	**(617) 492-2337**

The following profile outlines the products, services and support offered by Arthur D. Little to its clients.

1. Description of Principal Business

Founded in 1886, Arthur D. Little is an international management and technology consulting firm providing consulting in three areas—management consulting; environmental, health and safety consulting; and technology and product development.

Arthur D. Little operated as a public firm until June 1988, when shareholders voted to implement the Employee Stock Ownership Plan (ESOP) and the firm became a privately held corporation.

2. Organization

Headquartered in Cambridge (MA), Arthur D. Little has 51 offices in 30 countries.

Arthur D. Little has six subsidiaries as follows:

- Arthur D. Little Program Systems Management Company (PSMC), based in Cambridge (MA), manages and staffs major projects for industrial firms and government.

- Arthur D. Little Management Education Institute, Inc. (MEI), based in Cambridge (MA), is the professional education component of Arthur D. Little, Inc.

- Arthur D. Little Enterprises, Inc., based in Cambridge (MA), manages the commercialization of proprietary technology and develops equity opportunities for the parent company.

- Cambridge Consultants Ltd., Cambridge (England), provides technology consulting services, including research, development and deployment.

- Innovation Associates, Inc., acquired by Arthur D. Little in 1995, focuses on areas of leadership development, systems thinking, implementing organizational learning systems, developing high-performance teams and leading change implementation.

- The Joyce Institute, acquired in February 1995, is an ergonomics consulting firm.

3. Scope of Information Services and Related Activities

Arthur D. Little offers services through three main lines of business—management consulting; environmental, health and safety consulting; and technology and product development.

Management Consulting

Management consulting services are offered in eight core areas as follows:

- Strategy
- Customer management
- Information management
- Organization management
- Supply chain management
- Technology and innovation management
- Corporate finance management
- Manufacturing management

Environmental, Health and Safety Consulting

This group integrates technological expertise with management vision to provide services that include:

- Advanced chemical fingerprinting
- Environmental, health and safety auditing

- Environmental impact assessment
- Environmental strategy
- Ergonomics
- Industrial hygiene
- Management systems
- Natural resource damage assessment
- Occupational safety
- Pollution prevention
- Process safety
- Qualified risk assessment
- Radiation safety
- Remediation
- Risk management
- Safety management
- Site assessment
- Technology assessment
- Training
- Transportation safety

Technology and Product Development

This group is technology focused and business driven and offers services that include:

- Product development
- Technology assessment
- Technology development
- R&D management

4. Financial

Fiscal Year End:	12/31/94
1994 Total Revenue:	$433 M
1994 Information Services Revenue:	$52 M

Arthur D. Little's 1994 revenue was $433 million, a 13% increase over 1993.

Approximately 12% ($52 million) of Arthur D. Little's 1994 worldwide revenue was derived from professional consulting services in the information services field.

INPUT estimates that Arthur D. Little derived approximately 66% of its revenue

from management consulting; 17% from technology and product development; and 17% from environmental, health and safety consulting.

INPUT estimates that approximately 50% of Arthur D. Little's total 1994 revenue was derived from the U.S. and the remaining 50% was from Europe and international sources.

5. Company Strategy

In 1994, Arthur D. Little, with half of its revenues coming from outside the U.S., successfully became an international firm. With respect to its expansion strategy, the firm is rapidly pursuing both a global and a regional expansion program.

The firm is venturing into emerging markets such as India and Latin America through alliances and new offices.

6. Competitive Position

Arthur D. Little's competitors include traditional management consulting firms, environmental consulting firms and technology and product development firms.

The firm faces significant competition from major consulting firms, including McKinsey & Company, A.T. Kearney (EDS), Andersen Consulting, Coopers & Lybrand, Booz Allen & Hamilton, Gemini Consulting, CSC Consulting, Mercer Management Consulting and Monitor.

7. INPUT Assessment

Arthur D. Little's major strengths include:

- Its approach to building strong client involvement in engagement teams with a focus on team and client learning

- Expertise of consultants in a diverse set of industries and technologies

- Strong client base

- Global focus

- Ability to organize global teams in many industries

- Strong portfolio of diverse products

- Ability to innovate quickly

Challenges for the coming year include:

- Ability to continue to attract and retain industry experts

- Ability to maintain its aggressive expansion program

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

AT&T Global Information Solutions

Name: **Lars Nyberg**
Title: **Chairman & CEO**
1700 South Patterson Boulevard
Dayton, OH 45479
Phone: **(513) 445-5000**

The following profile outlines the products, services and support offered by AT&T Global Information Solutions (GIS) to its clients for systems integration and related services.

1. Description of Principal Business

AT&T GIS provides computer systems and products; associated maintenance/support; consulting, engineering, integration and implementation professional services to clients worldwide.

AT&T GIS' operations include a substantially enhanced professional services business, the former operations of NCR Corporation (acquired in 1991), certain computer business of AT&T Computer Systems and the parallel processing systems business of Teradata (acquired in 1992).

The AT&T GIS name was adopted in 1994 to reflect the company's new orientation and global capabilities in computing and communications.

2. Organization

AT&T GIS operated as one of five major groups within AT&T. On September 20, 1995, AT&T announced a strategic restructuring of its organization. The old AT&T organization has now been split into free-standing, independent companies that will operate in major business segments of the information industry—communications services, equipment and computing.

AT&T Global Information Solutions (GIS), is the computer unit and will be established as an independent company. It will continue providing computer platforms, placing special emphasis on the financial, retail and communications industries.

The new services business, operating under the brand name AT&T Corp., will be

BIPR

composed of AT&T's current Communications Services Group, the AT&T Universal Card Services Corporation, AT&T Solutions consulting and systems integration organization and AT&T Wireless Services. The services business had revenue of $49 billion in 1994.

The new communications systems and technology company, Communications Systems, will consist of AT&T Network Systems Group, Global Business Communications Systems, Consumer Products, AT&T Paradyne and Microelectronics. The equipment business contributed approximately $20 billion to AT&T's 1994 revenue.

Customer Focused Business Model

- The Customer Focused Team is the basis of AT&T GIS, providing a flattened organization that drives decision making closer to the customer.

- The Customer Focused Team is a cross-functional unit dedicated in selected industries to understanding customer needs and interests and working to deliver solutions fitting a customer's unique organizational structure.

The company's primary operating units are as follows:

- *Worldwide Marketing*

- *Worldwide Products and Systems*

- *Field Operations (The Americas)*

- *Field Operations (Europe & Middle East/Africa)*

- *Field Operations (Asia/Pacific)*

- *Worldwide Services*

- *Systemedia*

Worldwide Marketing's role is to establish AT&T GIS' market position, determine key target markets and strategies, determine sales resources and prioritize programs.

Products and Systems' role is to realize and deliver products, programs, and technical support for marketing and sales initiatives and worldwide distribution, and manage R&D, product and distribution costs relative to full-stream profit statements.

There are four basic product lines of business (workstations, computer systems, financial and retail systems) and two fully integrated lines of business (*Information Products* and *Materials and Logistics Management*).

Field Operations' role is Customer Focused Team development and support, product and solution sales, service and support; execution of global marketing programs; and the development and execution of local marketing programs.

Field Operations is divided into three groups—The Americas, Europe & Middle East/Africa and Asia/Pacific.

Worldwide Services' role is to develop offerings in professional services and customer support services. Once a new service is "productised" it is passed over to Field Operations to sell and implement. This unit's organization is shown in Exhibit A on the following page.

Systemedia focuses on the transaction media business, with core competencies in bar code systems, label and label form solutions, mailer design, thermal printing technology, MICR technology, inking media and electronic forms automation.

AT&T GIS Worldwide Services
Organization Structure

Customer

Customer Focused Teams

Areas

Consultants		Customer Engineers
Professional Services Line of Business		**Support Services Line of Business**
Service Development Practice Management Project Management Organizational Development		Global Response Global Programs Global Support Centers Parts Management

Worldwide Services Marketing

Worldwide Services
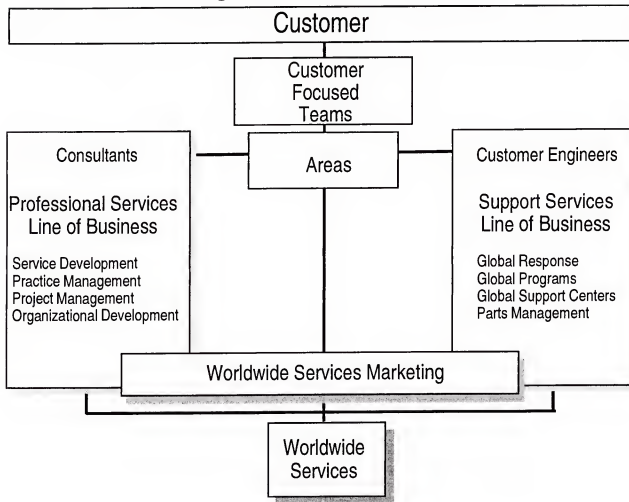
3. Scope of Systems Integration and Related Activities

AT&T GIS' services are provided through the Worldwide Services organization.

- AT&T GIS provides Customer-Focused Solutions to support its customers with timely, accurate decision-making data and the knowledge to use it effectively to drive business results.

- Customer Support Services offers implementation and life cycle management of hardware, networks, software applications and operating systems.

- Professional Services offers front-end business and technology consulting which addresses and solves industry-specific issues as well as services to assist during solutions deployment and delivery.

- AT&T GIS' services are summarized in Exhibits B and C.

AT&T GIS' core service competencies are as follows:

- *Customer Information Services*—AT&T provides decision-based solutions to better manage the direct link between clients and their customers. AT&T GIS provides the global infrastructure to design, implement and maintain the environment.

- *Network Computing*—AT&T GIS has experience with data, voice, imaging and video networking.

- *Global Distributed Open Solutions*—AT&T GIS has more than 10 years' experience in integrating, implementing and supporting open systems and can integrate and maintain disparate (multivendor) systems and mission-critical proprietary systems into a coherent, productive environment. Includes client/server migration, consulting and project management expertise.

- *Business Critical Environments*—AT&T GIS provides the technical expertise, global infrastructure, tools and methodologies to provide a premium level of service within business-critical and mission-critical environments in its targeted industries.

- *Massively parallel systems*—Database design and implementation

AT&T GIS Consulting and Network Service Solutions offers clients support in the following areas:

- *Total Customer Management*—Contains all the services that are required to guide clients through a change process to help them be more focused on their customers, combining customer relationship consulting, customer satisfaction research, customer information consulting, human interface services and integrated business renewal

- *Information and Technology Directions*—A consulting solution enabling clients to create their information and technology plans to support the realization of their enterprise business strategy

- *Network Computing Services*—A set of professional, support and management services to address issues concerning networking technology and its effects on the business

GlobalPM™—AT&T GIS' Project Management service methodology

Exhibit B

AT&T GIS Customer Focused Service Solutions

Consulting	Solutions Engineering	Integration/ Implementation	Solution Management

Total Customer Management

Network Computing Services

Information and Technology Planning

BCC and EIF Services

Desktop Services

ATM Total Service Solutions

Partnership Services

Exhibit C

AT&T GIS Service Offerings

Consulting	Solutions Engineering	Integration/ Implementation	Solution Management
• Business Reengineering • Org. Change Mgmt. • Customer Insight Consulting • Information Consulting • Enterprise Arch. Planning • Technology Consulting • Network Consulting • Human Interface Consulting	• Network Planning and Design • Tech. Solution Design • Application Development • Database Engineering	• Migration Planning • Network Integration • Systems Integration • Installation	• Tiered System Support • Help Desk • Software Support • Hardware Support • Multivendor Services Mgmt. • Self Maintenance • Network Mgmt.

Global Project Management

Education

• *Organization Change Management*—
Research-based methodology providing a
structured and customized approach to
implementing strategic and tactical
change initiatives

AT&T GIS offers several programs geared
toward providing Customer Focused
Solutions to its customers, including the
Enterprise Information Factory™ and
Business Critical Computing.

The Enterprise Information Factory
supports decision making as well as action
by integrating data from informational
systems and operational systems into a
single logical database management
system.

• It builds upon the detailed customer data
established in the data warehouse to
provide a single logical data model for
informational and operational
applications, giving organizations the
ability to turn decisions into actions,
better responding to customer needs and
implementing new processes in support of
horizontal reengineering efforts.

• Enterprise Information Factory services
have been developed to assist with all
phases of a solution. Services phases
include Needs Assessment, Solution
Identification, Solution Impact, Solution
Implementation and Solution Support
and Maintenance.

• At the operational level, AT&T GIS offers
core enabling products and services,
including:

- AT&T's TOP END application
management middleware product,
which allows thousands of information
requests to be handled on a response-
time-sensitive basis across a corporate
enterprise

- AT&T OneVision Network Management
Solutions, a means of giving businesses
a single point for monitoring and
managing the widely disparate
networking components deployed
throughout their enterprises.
OneVision facilitates deployment of the
Enterprise Information Factory by
providing a framework that helps
consolidate information from multiple
applications.

- AT&T Enterprise Messaging, a business
environment uniting electronic mail,
electronic data interchange, voice
messaging, workflow, query-by-mail
and wireless elements.

• This integration of services into a whole
product program benefits AT&T GIS and
clients by assisting the Customer Focused
Teams to deliver a solution that meets
customer expectations.

Business Critical Computing (BCC) is a
Solution Environment, consisting of
services, technology and alliances. The
objective of BCC is to provide a foundation
(environment) for AT&T GIS' industry
solutions and an IT reengineering Solution
Environment to enable the move from
legacy computers to open, distributed
computing.

• BCC is an industry-focused and services-
led program that begins with
understanding the customer's "business-
critical" processes and ends with the
implementation of Customer Focused
Solutions.

• BCC offers a portfolio of IT reengineering
approaches, including new client/server
development, new packaged application
integration, legacy application migration
and integration of existing application
and data assets.

Key Products

AT&T GIS offers the following hardware products:

• AT&T 3600 enterprise servers (massive parallel processors)

• AT&T 3500 enterprise services

• AT&T 3400 enterprise/departmental servers

• AT&T Notebook computers

• AT&T Globalyst personal computers

• NCR 3325 and NCR 3350 microcomputers

AT&T GIS also specializes in industry-specific equipment for the financial services and retail industries, including automated teller machines (ATMs), teller workstations, retail terminals and scanners.

AT&T GIS' Cooperative Computing Software provides an integrating environment for the company's Open Cooperative Computing Architecture. Products are grouped into four major categories:

• *Information Access Services*—to give users access to other systems in the enterprise

• *User Services*—to integrate the user with the information processing system to improve productivity and effectiveness

• *Application Services*—to allow developers to integrate existing applications and produce new, low-cost cooperative computing applications rapidly

• *Network Services*—to provide a number of local-area and wide-area network options.

4. Financial

Fiscal Year End:	12/31/94
1994 Total Revenue:	$8.46 billion
1994 U.S. Information Services Revenue:	$520 million*
1994 Systems Integration Revenue:	$170 million*

* INPUT Estimate

AT&T GIS' 1994 revenue reached $8.46 billion, a 16% increase over 1993 revenue of $7.26 billion.

A three-year summary of source of worldwide revenue, as provided by AT&T GIS, is shown on the following page.

AT&T GIS' $2.8 billion in worldwide services revenue for 1994 was segmented approximately as follows:

Support services	69%
Professional services/ systems integration	21%
Implementation services	8%
IT management	2%
	100%

INPUT estimates AT&T GIS had approximately $520 million in U.S. information services revenue for 1994, segmented as follows ($ millions):

Professional services	$150
Systems integration	170
Software products	200
	$520

Approximately 51% of AT&T GIS' total 1994 revenue was derived from the U.S. and 49% from international sources.

5. Strategy

Key global services strategies include:

- Delivering a full range of services that focus on providing robust solutions within AT&T GIS' targeted industries

- Leveraging alliance partners to complement AT&T GIS' core service competencies

- Continuing to make major investments in the services business and delivery infrastructures

- Leveraging across AT&T service capabilities to deliver integrated customer solutions

AT&T GIS' Professional Services revenue is currently at approximately $600 million worldwide, with the goal of reaching $1 billion by 1997. Professional services guiding principles for AT&T GIS include:

- Building strategic relations with customers by providing thought leadership for business and technology solutions

- Contributing essential knowledge and skills to success of Customer-Focused Teams

- Nurturing values-based partnerships that extend AT&T GIS' capabilities to benefit its customers

- Contributing growth and profits to AT&T GIS

6. Competitive Position

AT&T GIS' major competitors for professional services include IBM ISSC, Unisys, DEC and the "Big 6."

7. Recent Key Contracts

Customer Focused Solutions' project examples include the following:

- Providing an integrated customer information system for 800-FLOWERS to improve customer service

- Developing a solution to capture and consolidate point-of-sale data for Wal-Mart's 2,000 retail locations and a customer database. The data provides sales information on the products of approximately 3,400 Wal-Mart suppliers, allowing them to track buying trends by store and ship products when needed, resulting in reduced inventory costs.

- Assisting U S West Communications to consolidate (on a daily basis) customer and other information from seven data centers onto a backbone network for marketing, analysis and forecasting

- Supplying the networking and information system for Choice Hotels in support of its central reservations system and property management functions

- Supplying an information system to combine client information from eight government agencies into a single database and perform data analysis for the Australian Department of Social Services related to social security entitlements

- Working with System One (the reservations services subsidiary of Continental Air Lines) to facilitate education, training and market analysis of System One travel services and plan streamlining and reengineering of customer service, sales and product management processes, including providing hardware products and maintenance, software support, warehousing, integration and installation

- Providing workshops, business case studies, reengineering, integration

consulting, networking consulting, database consulting, rapid application development, project management and a massively parallel system to U.K.-based retailer W.H. Smith to improve information flow

- Providing solution engineering and solution integration for Kmart related to product sales tracking

- Providing a full solution to Banc One for credit card authorizations

- Providing a networked store automation solution for SuperAmerica

- Providing network consulting for National Westminster Bank

AT&T GIS also offers a range of IT project management, consulting and associated services. Contract examples include the following:

- Working with other subcontractors to build a LAN Administration Control Center in Houston to support Continental Airlines' operations throughout the U.S.

- Network design, planning and integration services for Bank of America

- Business process reengineering and related consulting for Bank of Boston's

deposit account management functions.

- Developing and integrating a reengineered retail lockbox system for First Union Bank

- Providing consulting, application development and implementation services for Ameritech's Civic Link Services

- Providing systems analysis and logical data modeling to the Suffolk County Department of Civil Service

- Providing network design and implementation services to Oklahoma Gas & Electric

8. INPUT Assessment

AT&T GIS has maintained a low-key image but is now changing and attempting to promote its service capabilities. In today's IT market, this change is essential. AT&T GIS needs to double its Professional Services business in order to compete with companies such as IBM ISSC and Unisys.

The new restructuring by AT&T will provide a sharper focus to the individual areas of expertise—service, equipment and computing. AT&T has chosen to restructure along product/service lines. The split has, however, conveniently positioned AT&T GIS for an acquisition in the future.

Challenges for AT&T GIS include:

- Being responsive to market growth

- Investing in resources to facilitate growth

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

December 1995

Cambridge Technology Partners, Inc.

Name: Warren V. Musser
Title: President & CEO
304 Vassar Street
Cambridge, MA 02139
Phone: (617) 374-9800
Fax: (617) 374-8300

The following profile outlines the products, services and support offered by Cambridge Technology Partners (CTP) to its clients for systems integration and related services.

1. Description of Principal Business

CTP is an international systems integration and professional services firm that provides software development and consulting services to organizations with large-scale information processing and distribution needs that are using or migrating to open systems computing environments and client/server technology.

- Services are provided at the enterprise-wide, specific business process and application software levels of an organization.

- Upon the completion of consulting services, CTP designs, develops and implements one or more strategic software applications. These software applications are designed to achieve a competitive advantage, enhance the efficiency and functionality of specific business processes and support financial goals of the client.

- Though the early stages of a client engagement may result in a relatively small amount of revenue, a client project that involves the design, development and implementation of a strategic software application generally results in fees ranging from $1 million to $3 million.

- CTP has provided services to clients in a range of industries. Industrial companies and clients in the aerospace, insurance, financial services, telecommunications and

consumer products industries, as well as state and local governmental agencies have provided the greatest source of revenue.

2. Organization

CTP is headquartered in Cambridge (MA). The company's Network Services Group, established in 1994, provides network design, analysis and planning services to build the infrastructure clients need to support a distributed computing environment. In addition, The Management Lab was established during 1994 to provide clients with research and educational services.

3. Scope of Current Systems Integration and Related Activities

CTP provides information technology consulting and software development services designed to achieve a competitive advantage, enhance the efficiency and functionality of specific business processes and support financial goals.

- To achieve these objectives, CTP uses its rapid development methodology to take a client through design, development and roll-out of a significant strategic business application in approximately nine months, a timeframe CTP believes to be significantly shorter than those of its competitors.

- CTP's custom software design and development activities have accounted for most of the company's revenues and market focus to date. However, the company's consulting services are expected to provide important leads to software development projects.

Consulting

CTP provides consulting services to address information technology issues occurring at three organizational levels—the enterprise

level, the specific business process level and the application level.

Enterprise-Wide Information Technology Planning services are designed to provide a strategy, or "Open Enterprise Plan" for implementing enterprise-wide migration to an open systems computing environment.

- CTP typically prepares an Open Enterprise Plan in four to eight weeks. CTP interacts with a client's executives and other key personnel to identify the goals of the enterprise and any factors critical to achieving these goals.

- After identifying goals and success factors, CTP assesses: the performance of the existing IT and computing environment in supporting the business goals; the readiness of the client's MIS professionals to build and support an open systems environment; and structural performance limitations inherent in the existing computing environment.

- Following this assessment, CTP defines strategies at three levels—application strategy, organizational strategy and technology strategy.

  - The application strategy identifies specific strategic software applications and prioritizes these applications based on the business goals of the enterprise. By prioritizing applications in this matter, CTP's clients can focus their resources on implementing the applications that they believe will deliver the largest return on investment.

  - The organizational strategy outlines methods for developing the skill sets necessary to maintain an open systems environment and to manage potential resistance to change.

- The technology strategy identifies the specific hardware, software, tools and other technologies necessary to develop and maintain the open system.

Business Process Redesign services involve the redesign of a particular business function identified by the client.

- The methodology for CTP's business process redesign services is based on an intense eight-to twelve-week consulting effort designed to develop improved business processes and achieve a client's business goals.

- The company's methodology combines enabling technologies, such as client/server architectures and graphical user interfaces, with the client's knowledge of its business, in order to improve business processes.

- At the completion of the project, CTP provides a report comparing the proposed new business process with the current process, a business case to support the change and a plan for project implementation.

Software Development
CTP's software development process is divided into six general stages.

Scoping is a one- or two-week process for identifying strategic applications most likely to maximize a client's return on IT investment, achieve a competitive advantage, enhance the efficiency and functionality of specific business processes and support financial goals.

Rapid Solutions Workshop (RSW) refers to a three-week process involving a team of CTP's project managers, analysts and software developers, as well as a team of the client's

executives, information system end users and MIS professionals.

- The first two weeks of the process involves a cooperative effort with the client to identify the scope of the application, to design the features of a prototype and to build a business case supporting the application.

- During the final week of the process, the teams participate in an intensive workshop process held at one of CTP's facilities (Cambridge, Los Angeles, New York, Lansing, the U.K., the Netherlands or Sweden). Together, the client and CTP teams develop a functional prototype of the chosen strategic application, define required functionality based on the jointly created business case and resolve key business and technical implementation issues.

- The RSW concludes with a presentation of the application prototype by the client team to the client's executives. The inclusive nature of the RSW, coupled with the technical proof of the application concept offered by a prototype demonstration, builds consensus for the chosen application and adds momentum to the process.

- The RSW process can also be used by clients to build consensus for the implementation of a redesigned business process or a third-party software package.

Design—includes a functional and technical blueprint of the software application to be developed

The fees for CTP's services are typically fixed in advance of each stage of the software development process for which CTP has been engaged.

Development—These services include: development of the custom software necessary

to operate the application; systems integration, including integration of the application into existing information processing architecture, and the coordination of hardware requirements and network configuration and testing and implementation of the application.

Roll-Out—Upon completion of the software development process, CTP assists its clients in the roll-out of the application into the workplace and its assimilation into the production environment. CTP also assists its clients in managing the organizational changes that accompany the roll-out of the application.

Support—CTP offers various optional services to support the developed software application. These include application enhancements, application maintenance, project management support, developer support, software tools support, systems management support and systems training for client personnel.

- These services can be contracted individually or as a part of a package with development and roll-out services.

- Support services are available for periods ranging from three months to one year. CTP charges a support fee based on a per diem rate.

Empowerment

The goal of these services is to enhance client independence through training in the technologies and methods used to develop and maintain open systems applications. These services range from formal training in the skill sets required to develop additional software applications to administer and support the developed software and use the applicable software tools, to informal hands-on experience and direct interaction with CTP

personnel throughout the application development process.

Network Services

CTP's Network Services Group provides computer network analysis, design, deployment and support services either in connection with application development projects or as independent engagements.

4. Financial

Fiscal Year End:	12/31/94
1994 Total Company Revenue:	$59.7 M
1994 Worldwide Systems Integration Revenue:	$59.7 M
1994 North American Systems Integration Revenue:	$47.8 M

CTP's 1994 revenue reached $59.7 million, an 82% increase over 1993 revenue of $32.7 million.

One hundred percent of CTP's 1994 revenue was derived from systems integration/professional services.

Approximately 80% of CTP's 1994 revenue was derived from North America and 20% from Europe. A three-year financial summary is shown below.

CTP markets its services to a range of industries, including:

Insurance—CTP's specific market focus is life, property and casualty insurance and Blue Cross & Blue Shield plans.

Industrial—Clients include a diverse group of manufacturing companies that share large-scale information processing needs and desire for business applications that reduce costs and enhance productivity and customer service.

Financial Services—Clients include brokerage and investment firms.

Telecommunications—CTP targets telephone, radio and cellular companies.

5. Strategy

CTP's objective is to be the leading provider of enterprise-wide information technology (IT) solutions for organizations with large-scale information processing and distribution needs that are using or migrating to open systems computing environments.

The company's strategy for achieving this goal includes the following elements:

- *Developing strong partnering relationships with clients*—CTP's interactive approach to problem solving and application software development involves consensus building among a client's executives, computer system end users and MIS professionals to strengthen client relationships. This approach also enables CTP to design, develop and implement IT solutions that allow the client to achieve competitive advantage, enhance the efficiency and functionality of specific business processes and support financial goals. Whether developing an open enterprise plan for implementing an enterprise-wide migration to an open computing environment or developing single or multiple strategic software applications, CTP seeks to establish itself as the client's preferred source for strategic IT solutions.

  The company also extends its partnering relationships with clients beyond specific engagements by offering educational and training programs through its interactive management lab and CIO Forums and other information-sharing programs that provide clients with opportunities to exchange ideas with their peers, as well as learn about new information technologies and client/server trends.

- *Facilitating migration to flexible computing environments*—CTP's application development process enables clients to develop an open computing environment incrementally by implementing strategic software applications that can operate across existing hardware platforms and leverage existing information processing infrastructure. The company's approach to implementing IT solutions in most cases involves the introduction or further implementation of client/server architectures. The migration to open computing environments also provides opportunities to rebuild or redesign existing host-based software applications.

- *Structuring client projects at fixed prices and on fixed timetables*—CTP helps clients align desired IT solutions and technology investment by using rapid software development techniques to deliver IT solutions on a fixed price and fixed timetable basis. At the commencement of a project engagement, CTP and its clients agree on the nature of project deliverables, a fixed price and a fixed timetable for the project. CTP's goal is to keep individual application development projects under nine months in duration to increase the client's ability to use the IT solution to maximize competitive advantage.

  CTP is developing a library of object-oriented software components to be reused in software application development in order to further improve the efficiency and quality of the application development process.

- *Market expansion*—CTP believes that a strong domestic presence enhances

competitiveness. The company plans to continue to expand domestically through the establishment of additional regional sales offices and operations facilities in major North American cities.

To capitalize on market opportunities in Europe, CTP established sales and operation facilities in England and the Netherlands in 1993 and acquired IOS Group AB of Sweden (now CTP Scandinavia) in early 1994. CTP also plans to continue to increase its international presence by establishing additional sales offices and joint ventures, primarily in Europe.

6. Competitive Position

CTP's competitors include BSG Corporation, Andersen Consulting, Technology Solutions Corporation, SHL Systemhouse, Innovative Information Systems, CAP Gemini America, Computer Sciences Corporation, EDS, Keane, Hewlett-Packard, Unisys and DEC.

7. Recent Key Contracts

Insurance

CTP's market focus is life, property and casualty insurance and Blue Cross & Blue Shield plans.

CTP has been engaged to develop information systems that improve customer service and customer satisfaction through quicker and more complete access to customer information, and reduce the training time required for customer service representatives.

For ReliaStar Financial Corp. (formerly Northwestern National Life Insurance Company), CTP is developing a customer service workstation that provides an integrated view of client information.

CTP is working with Blue Cross & Blue Shield of Rhode Island to design, develop and

implement a system that integrates membership, claims and research information from separate databases and to develop a customer information network that integrates marketing, underwriting, benefits analysis and communications.

Other clients in the insurance industry include Blue Cross & Blue Shield of Hawaii.

Industrial

CTP has developed experience with respect to applications having broad appeal, such as inventory control and production and delivery scheduling systems.

For Air Products and Chemicals, CTP is developing two systems to support customer service (The Single Point of Contact System) and sales functions (Catalyst).

For Union Pacific Resources Company, CTP developed an application for collecting production data at the source on a real-time basis, which provides shared access to such data between the corporate office and the production site and enhanced decision-making capabilities.

For the Northrop Grumman Commercial Aircraft Division, CTP provided an Open Enterprise Plan to streamline business processes and integrate information using a distributed environment.

CTP has also developed and implemented strategic applications for Hasbro, Lockheed Missiles and Space Company, Hughes Space and Communications Company, Hoechst Celanese, Ingersoll-Rand, Nike, Saab/Scania, and Unilever, among others.

Financial Services

CTP designed and developed a broker workstation for J.P. Morgan & Co.

For Massachusetts Financial Services Co., CTP designed and developed a sales and marketing system.

For Charles Schwab & Co., CTP developed a financial decision support system to consolidate financial information.

CTP also designed and developed a system for securities traders at Putnam Investments that enables traders to trade more effectively and efficiently by allowing the traders to receive new orders directly from portfolio managers and to price these orders automatically using live market data.

For Federal National Mortgage Association (Fannie Mae), CTP provided a rapid consensus (assimilation) workshop for users to build IT client/server skills.

Telecommunications

CTP developed a customer service system for the PersonaLink Services division of AT&T that is designed to enable a customer service representative to retrieve relevant customer information prior to answering the call and to monitor usage to facilitate more efficient cross-selling and telemarketing to existing customers.

Other telecommunications clients include Pacific Bell, Ericsson Radio AB and Los Angeles Cellular Telephone Co.

Government

Clients have included the Michigan Department of Transportation's Office of Information Management, Florida Insurance and the Dutch Ministry of Economic Affairs.

8. INPUT Assessment

CTP was one of the first companies to offer client/server rapid application development and often builds applications in six months. The company's approach to development appeals to large companies, especially for large or very large projects.

A challenge for CTP is to expand its client engagements outside its traditional markets while managing the company's rapid growth.

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

CAP GEMINI AMERICA

Name: **Michel Berty**
Title: **Chairman & CEO**
1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710
Phone: **(212) 944-6464**
Fax: **(212) 819-1715**

The following profile outlines the products, services and support offered by CAP Gemini America (CGA) to its clients for systems integration and related services.

1. Description of Principal Business

CGA provides information systems transformation and integration services that include systems planning, client/server and object-oriented systems development; legacy systems management, maintenance, enhancement and renovation services; and packaged software implementation.

2. Organization

CGA is the U.S. division of the CGS Group, one of Europe's largest information technology companies. Headquartered in New York, CGA is responsible for the worldwide coordination of CGS' process industries, which include the oil, gas and chemicals sector.

CGA is organized by centers of expertise. These competency centers are staffed with centralized groups of specialists possessing specific technical expertise.

CGA has focused on understanding business needs on a sector-by-sector basis. The company serves its targeted vertical markets through business sectors that include the following:

- Process Industries
- Financial Services sector
- Consumer Goods sector
- Manufacturing sector
- Telecommunications sector

CGA has reorganized its 35 business units into five divisions—Central, East, South, West and Midwest.

The five U.S. division managers are in charge of the units, and oversee sales and delivery of service offerings throughout their respective divisions.

3. Scope of Systems Integration and Related Activities

CGA defines its current operations along five lines of business:

- Consulting

  - Information technology consulting
  - Application consulting

- Project services

  - Systems integration
  - Software development
  - Migration
  - Professional services

- Information systems management

  - Applications management

- Education and training

  - User training
  - Professional skills training
  - Technical training

- Software methodologies and tools

  - Methodologies
  - Tools

CGA has expertise in all types of conversions, as well as a range of technical capabilities and project management skills, including:

- Project management methodologies

- Application design, development and documentation

- System conversions and migrations

- Software engineering

- Applications maintenance

CGA's National Centers of Competency support client projects and include the following:

- Integrated Manufacturing Technology (IMT)
- Reengineering/Conversions
- Software Engineering
- Applications Management

CGA's five business sectors offer the following six services:

Process Industries

CGA is responsible for the worldwide coordination of this sector. CGA supports point-of-sale, credit card management (CCM) and document management applications, among the other services it offers to this industry.

Financial Services

CGA's Financial Services Group focuses on meeting needs of clients, including banking, securities, insurance, trading systems, back-office operations and risk management, among other aspects.

Consumer Goods

This group provides consulting and implementation support to retailers, distributors and manufacturers of consumer goods. Service offerings could include implementing EDI, building data warehouses, or planning and implementation for technology transformation.

Manufacturing

This sector supports the manufacturing cycle, from product design, material resource planning, plant automation and shop floor control to product warehousing and distribution.

Telecommunications

CGA offers provides information technology solutions to the telecommunications industry. Services offered include telecommunications management systems, electronic mail system engineering, local- and wide-area network evaluation and design, customer care and billing, and software tools, education and training.

Transmillennium Services

In March 1995, CGA introduced its "TransMillennium Services" solution that uses artificial intelligence-based tools to renovate applications affected by the year 2000 date problems, and includes assessment, strategy, applications renovation, testing and implementation services.

CGA has business partnerships with various vendors that allow CGA to perform in both prime and subcontractor roles in systems transformation projects. CGA has agreements with IBM, Bull, Wang, Carleton, Intersolv, NeXT, Novell and Hewlett-Packard, among others.

4. Financial

Fiscal Year End:	12/31/94
1994 Total Revenue:	$197 M
1994 Information Services Revenue:	$197 M

CGA's 1994 revenue was approximately $197 million, up 16% from about $170 million in 1993. The company anticipates 15% revenue growth in 1995.

One hundred percent of CGA's revenue is derived from its systems transformation services.

CGA's revenue is derived from the following industry sectors:

Process industries	11%
Manufacturing	22%
Telecommunications	13%
Financial services	24%
Administration and public safety	6%
Utilities	3%
Retail	13%
Travel and tourism	8%
	100%

Virtually 100% of CGA's revenue is derived from the U.S.

5. Systems Integration Strategy

CGA and its parent company CGS have expanded from contract programming to large-scale systems transformation projects. CGA has migrated toward working on larger projects and has focused on developing vertical market expertise. CGA uses a best-of-breed approach in the delivery of its services and believes in leveraging its historic cumulative experience. CGA also forms partnerships with best-of-breed companies to deliver quality services.

CGA's strategy is to evaluate and identify client needs by understanding each client's business operations.

6. Competitive Position

CGA competes with large U.S. information technology consulting companies, including Andersen Consulting, Electronic Data Systems, Computer Sciences and IBM ISSC.

7. Recent Key Contracts

Some significant contracts awarded to CGA include the following:

- In April 1995, CGA and its alliance partners—The Genix Group and I-NET— won a $100 million contract from Ralcorp Holdings, Inc. According to the agreement, CGA will provide overall program management for the partnership and will provide Ralcorp's business systems planning, transformation and management services.

- The National Football League Players Association (NFLPA) chose CGA to architect and implement a client/server system, including database, accounting, general office, networking and operating system software. In addition to managing the NFLPA's complete systems transformation, CGA also supported its former systems until the new systems were in place.

- CGA designed a client/server system for the Mercedes-Benz Credit Corporation that provides on-line access, rapid response and high reliability information exchange to support its information needs.

- TOTAL Petroleum outsourced its systems management to CGA. During the five-year contract, CGA provided applications management, computer operations, technical support, networking, communication and help desk services to TOTAL Petroleum.

8. INPUT Assessment

CGA's strengths include:

- Experience managing complex or large projects

- Operating as part of a diversified team (partnering with the client's resources)

- Operating as a multinational team (partnering with CGS' worldwide resources)

- ISO9001 quality certification for the study, design, implementation and maintenance of information systems

Challenges for the coming year include:

- Efficiently managing resource growth

- Increasing speed of new service offering roll-outs

- Keeping pace with the explosive demand for the Year 2000 solutions

Parent Company

CAP Gemini Sogeti

Corporate Headquarters:
3, rue Malakoff - B.P. 206
38005 Grenoble Cedex 1
Tel: 33 76 59 63 00
France

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

December 1995

Coopers & Lybrand LLP

Name: **John M. Jacobs**
Title: **Vice Chairman**
Coopers and Lybrand Consulting
1251 Avenue of the Americas
New York, NY 10020
Phone: **(212) 536-2000**
Fax: **(212) 536-3500**

The following profile outlines the products, services and support offered by Coopers & Lybrand (C&L) to its clients for systems integration and related services.

1. Description of Principal Business

C&L is an international professional services firm that provides accounting, auditing, tax and management consulting and actuarial, employee benefits and compensation services to business, industry and government. Information services provided by C&L include consulting, software development and systems integration.

2. Organization

C&L has five primary lines of business:

- Business Assurance
- Financial Advisory
- Coopers & Lybrand Consulting
- Tax
- Human Resource Advisory

A summary of C&L's core businesses is presented in Exhibit A on the following page.

As a result of its own business process reengineering, C&L has established five core lines of business and has renamed its Management Consulting practice "Coopers & Lybrand Consulting." This unit is headed by John Jacobs.

The initial industry focus for Coopers & Lybrand Consulting is the commercial/industrial, financial services, information and telecommunications, health care, higher education, government and retail industries. It provides consulting services within industry and functional areas.

C&L operates through a network of more than 100 offices in 125 countries worldwide.

3. Scope of Systems Integration and Related Activities

The following discussion focuses on the information services provided by C&L through Coopers & Lybrand Consulting.

Coopers & Lybrand Consulting provides strategic planning assistance to reengineer processes, develop technology plans and restructure and design organizations.

Services offered by Coopers & Lybrand Consulting's six functionally oriented practices include the following:

- Financial Management and Business Analysis (FMBA) is a national practice that offers performance measurement services and cost analysis.

- Integrated Management Services (IMS) brings together C&L's strategic management, business process analysis, total quality management and organizational analysis capabilities.

- Technology Advisory Services (TAS) is a national practice that provides consulting services that encompass three major service lines as follows:

  - Strategy
  - Tactical planning and engineering
  - Advanced technologies

- The High Technology practice is designed to improve operational processes such as:

  - Product development in manufacturing industries

  - Product development in service industries

  - Fabrication and assembly in manufacturing industries

  - Service delivery in service industries

- Solutions Thru Technology is the technical consulting unit of Coopers & Lybrand Consulting that facilitates systems development and implementation through the following services:

  - Project management
  - Telecommunications and networking
  - Client/server architecture
  - Management and industry consulting and planning
  - Systems and package selection installation and tuning
  - CASE tools and midrange and mainframe technologies reengineering
  - Systems analysis and design
  - Programming and testing
  - Conversions
  - Applications maintenance and year 2000
  - Facilities management
  - Workflow management/workgroup implementation
  - Imaging
  - SUMMIT (proprietary) life cycle methodology
  - Technology architecture planning
  - Decision support systems

- Data warehousing

- Business systems

- Staff enhancement

• The Supply Chain Management/SysteCon practice focuses on supply chain management and provides strategic and tactical consulting support in four areas:

- TotaLogistics℠ strategy
- Manufacturing operations
- Distribution operations
- Logistics information systems

The following summarizes Coopers & Lybrand Consulting's industry group offerings:

The Retail group provides BPR, TQM, cost reduction, cycle time reduction, asset performance, process simulator, change management, research and development and crisis problem solving services to the following industry segments:

• Food and beverage
• Household products
• Health and beauty aids
• Textile and leather goods
• Office supplies

The Commercial/Industrial practice offers services that include:

• Manufacturing
• Strategy development
• BPR
• Cycle time reduction
• TQM
• SPARKS process simulator
• Asset performance
• Change management
• Cost reduction

Services offered in the Financial Services area encompass:

• Information technology
• Resource management
• Financial risk management
• Financial management
• Strategy and business planning

The Government Consulting practice serves the public and private sector through the following three groups:

• The Performance Management Group offers productivity, organizational, strategic and human resource services.

• The Technology and Financial Group offers a range of information technology management services, from enterprise level planning to design and implementation.

• The International Management Consulting Services Group offers capital market development, enterprise development and trade and investment promotion services.

The Higher Education practice focuses on the restructuring of higher education through six areas of concentration:

• Operations and productivity
• Facilities
• Human resources
• Governance organization and planning
• Information technology
• Financial management and accounting

The Information/Communication practice covers the telecommunications industry and offers services in four areas:

• Business planning and strategy
• Operations improvement
• International
• Information technology

The Integrated Health Care Consulting Services (IHCCS) practice offers a range of services through four units:

- The Health Care Strategy, Planning and Operations unit focuses on areas of strategic positioning, business support processes, and plans and action programs for accomplishing cost effectiveness.

- The Health Care Information Technology unit offers services in areas of application information systems, strategies, architectures, decision support, vendor package selections and implementations, and large-scale integrations.

- The Pharmaceuticals unit provides business solutions in areas of strategic positioning, operations improvement, information systems, product introduction, and compliance and control to the pharmaceutical, biotechnology, medical devices and diagnostics industries.

- The Integrated Clinical Management unit focuses on developing the clinical and medical aspects of the health care business.

The International Consulting practice offers a global perspective to fulfill the service demands of major multinational companies.

Systems Integration and Professional Services
Coopers & Lybrand Consulting provides a range of systems integration and professional services. By focusing on selected vertical industries, the firm can compete in its areas of greatest strength.

Coopers & Lybrand Consulting gains a competitive edge in the availability of highly marketable and specialized capabilities. Some of these capabilities are:

- A full systems design, development and implementation capability using CASE tools and advanced project management techniques

- A range of technical and advisory industry skills developed through Coopers & Lybrand Consulting's long experience as an auditing and management consulting firm

- Expertise in connectivity solutions—client/server and other distributed processing technologies

- Systems architecture and database expertise to modernize systems and relational database applications

- Strong expertise in advanced technologies and applications, especially in decision support and data warehousing systems

Business Process Reengineering
Coopers & Lybrand Consulting defines business process reengineering (BPR) as a means of achieving radical improvement in performance and business competitiveness by identifying core business processes. The firm believes it is essential to be selective—choose only one or two processes that will give the greatest return as perceived by the customer—otherwise the changes may be too great for an organization to absorb. However, Coopers & Lybrand Consulting also stresses that BPR is not merely gaining better performance from an organization's information systems.

- Coopers & Lybrand Consulting's prime offering is BreakPoint BPR with four main components:

  - Core process definition
  - BreakPoint identification
  - Process redesign

- Change management

Other related services that may lead to the use of BPR services include total quality management and activity- and time-based management.

Coopers & Lybrand Consulting's BPR projects typically involve the redesign of the client products supply chain to deliver improved customer service and reduce lead times and provide greater flexibility and reduce process costs. BPR projects typically lead to a need to redesign and re-implement the information systems support for those processes affected.

Coopers & Lybrand Consulting typically does not have or seek strategic alliances with other vendors related to providing BPR services. The retention of independence is seen by the firm as a key factor in its services.

Coopers & Lybrand Consulting's proprietary analytic tools and techniques that support business process reengineering services include the following:

- Benchmarking, to focus reengineering efforts on areas of greatest opportunity and set goals for improvement

- Process mapping, to document and examine workflows

- SPARKS process simulator, a workflow reengineering and process modeling tool

- SUMMIT methodologies, to assure information technology supports business strategy and systems are integrated to support redesigned core processes

- Just-in-Time principles, applied to shrink backlog by improving workflow,

revamping work space layout and reducing overhead costs

- Supply chain management, an approach to decrease inventory and production costs, improve speed and quality of product distribution

- Cycle time reduction, to improve balance sheet performance by shrinking lead time to maximize return on assets

- Speed to market, to improve research and development and other processes

- Activity-based management, to improve value-added activities and eliminate activities that do not add value to the product or service

- Route mapping, to manage a variety of IT- oriented reengineering projects by using different components from the firm's IT methodologies

- Change management, to define skills and infrastructure requirements necessary to assure a successful transition to the re-engineered business

Systems Integration

Coopers & Lybrand Consulting delivers the full life cycle of systems integration services. Offerings include:

- Business and management consulting

- Systems design, development and implementation

- Selection, evaluation and acquisition of hardware, software and telecommunications equipment

- Network management and operations

- Software maintenance

Coopers & Lybrand Consulting also uses strategic alliances to strengthen its systems integration practice areas. The alliances are chosen to increase the scope of the firm's systems integration offerings and improve its competitive position in the marketplace.

Outsourcing

Coopers & Lybrand Consulting offers application maintenance services in four key areas:

- Maintenance outsourcing—Maintenance of legacy software, applications and databases

- Facilities management—Handling of hardware, networks, database administration, building and staffing

- Information service assessments—Analysis of the IT organization and software assets

- Best practices—Identification of the best techniques to maintain legacy systems

4. Financial

Fiscal Year End:	12/31/94
1994 Total Revenue:	$5.538 B
1994 Information Services Revenue:	$475 M

C&L's total worldwide revenue for 1994 was approximately $5.538 billion, compared to approximately $5.22 billion in 1993.

Worldwide consulting revenue was $1.324 billion in 1994, compared to $1.137 billion in 1993.

C&L's worldwide information services revenue was $475 million in 1994.

INPUT estimates that approximately 30% of C&L's revenue was derived from the U.S. in 1994, as compared to 31% in 1993.

Approximately 45% ($591 million) of C&L's consulting revenue was derived from the U.S. and the remaining 55% ($733 million) from international sources.

Approximately 32% ($150 million) of C&L's information services revenue was derived from the U.S. and the remaining 68% ($325 million) from international sources.

5. Strategy

C&L has also established four internal core competencies—international; infrastructure; learning and human resources; and technology. Ellen Knapp, the Vice Chairman for Technology, is focused on international applications information technology within C&L.

C&L stresses industry expertise and specialization in its goal of forming strategic partnerships with its clients.

The firm aims to win every market it serves by excelling in client relationship management, the use of technology to deliver more timely and relevant services, and the understanding of markets and industries in which its clients operate.

6. Competitive Position

Major competitors include Andersen Consulting, Ernst & Young, KPMG Peat Marwick, Deloitte & Touche, McKinsey & Company, Boston Consulting Group, Booz, Allen & Hamilton and Gemini Consulting.

7. INPUT Assessment

Some of Coopers & Lybrand Consulting's strengths include:

7

- Expertise in both strategy and operational consulting

- Alliances with major information technology vendors including IBM, HP and Oracle

- Knowledge of manufacturing and financial services in relation to information technology planning

Some of the challenges faced by the firm include the following:

- To develop a flexible internal organization to deliver information services within the existing partnership structure

- To recruit staff of the right caliber to take the company strategy forward

C&L believes one of the key driving forces in its market for information services is the increasing complexity of delivering products to sophisticated buyers.

For C&L clients, this means that customers are increasing their expectations of quality, flexibility and timeliness from their suppliers. Furthermore, the rapid pace of technology developments means C&L customers are reevaluating their own customers' needs and are measuring themselves against industry benchmarks.

Reengineering of the U.S. corporation and technology developments are driving the increase in C&L's information services practices.

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

IT2000

Vendor Profile

December 1995

Ernst & Young LLP
Management Consulting

Name: Roger R. Nelson
Title: Deputy Chairman
787 Seventh Avenue
New York, NY 10019
Phone: (212) 773-6350
Fax: (212) 773-5682

The following profile outlines the products, services and support offered by Ernst & Young LLP Management Consulting to its clients for systems integration and related services.

1. Description of Principal Business

Ernst & Young Management Consulting Services provides a range of systems integration, outsourcing and consulting professional services and applications development tools to large multinational companies.

Management Consulting Services is one of six businesses within Ernst & Young's Consulting Services unit. Other Consulting Services areas include Business Management Services, Financial Advisory Services, Health Care Consulting, Human Resources Consulting and Entrepreneurial Consulting.

2. Organization

Ernst & Young's Management Consulting unit includes the following two practices, which work closely together on client projects:

- *Performance Improvement (PI)* offers a series of methodologies for improving processes within an organization, such as change management and total quality processes.

- *Information Technology (IT) Consulting* provides a range of IT consulting, systems integration, application development and systems management/outsourcing services to help clients solve business

BIPR

problems, enable or support business strategy and accomplish desired business results.

With these two practices are eight service lines as follows:

- *Business Reengineering Services*

- *Outsourcing*

- *Systems Development and Integration*

- *Technology Enablement*

- *SAP*

- *Multimedia*

- *Knowledge/Information Management*

- *Business Change Implementation*

Ernst & Young Management Consulting's thought leadership is divided into 24 knowledge networks providing consulting services, proposals and leadership in areas segmented by industry, process and service line.

Ernst & Young Management Consulting operates through approximately 92 offices across the U.S. and Puerto Rico and in more than 600 cities internationally.

- U.S. operations are structured into two regions—Region 1 (East/Great Lakes) and Region 2 (South/West).

- International operations are segmented by country practice. There are 40+ country practices outside the U.S.

3. Scope of Systems Integration and Related Activities

Ernst & Young has structured its integrated management consulting services on a "portfolio approach." Eight groups of services are selectively integrated to address specific customer needs. They include the following:

Business Reengineering Services

Specific services provided within this service line are:

- Business process innovation
- Performance measurement
- Focused and continuous improvement
- Operations strategies
- Improvement portfolio prioritization

Outsourcing

Specific services provided within this service line include:

- Process outsourcing
- Information technology outsourcing
- Outsourcing assessment and strategy

Ernst & Young offers a range of outsourcing services to large organizations, including the management of technology infrastructure and business processes.

Systems Development and Integration

Specific services provided within this service line include:

- Application of technology to analysis/design of business solutions
- Accelerated systems development services
- Advanced Development Center-based rapid development
- Software package selection and implementation
- Project management for large systems development and implementation projects

Technology Enablement

Specific services provided within the service line include:

- Accelerated technology architecture definition
- Legacy management services
- Rapid technology assessment
- Research into emerging technologies

- Network consulting

SAP

Specific services provided within this service line include:

- COMPOSITE^{SM} global design
- Seamless SAP global reengineering
- Knowledge-based configuration
- Implementation team training
- End-user training
- SAP implementation services

In February 1995, Ernst & Young announced a twofold expansion of its SAP consulting practice that would be united under a newly named Worldwide Director of SAP Services.

- The organization has more than 575 consultants, including 40 partners, experienced in SAP applications in 18 countries.

- Global consulting capabilities for SAP customers include business process reengineering, information technology, industry-specific expertise, best practices, tools, templates and personnel.

- Ernst & Young has established SAP Centers of Excellence to continue to build its SAP consulting resources through additional training, education, research and development. Each Center also provides technical support and client-directed training and demonstrations. Three additional Centers will open this year to increase the speed with which Ernst & Young analyzes customer application opportunities, deploys training resources and transfers best practices and new technologies.

- Ernst & Young has developed a worldwide process methodology for SAP projects at its Center for Business Transformation.

The SAP implementation methodology—called the SAP R/3 Route Map—is an integrated part of Ernst & Young's Navigator Systems Series methodology which enables the company rapidly to design and implement SAP solutions.

Multimedia

Specific services provided within this service line include:

- Technology, entertainment and communications industry services
- Opportunity analysis
- Business strategy planning
- Scenario development
- Technology architecture
- Competitive assessment
- Market analysis
- Acquisition/joint venture advisory services
- Industry restructuring advisory services

Knowledge/Information Management

Specific services provided within this service line include:

- Knowledge/information capture, representation and dissemination
- Structure to support knowledge/information
- Knowledge/information management strategy

Business Change Implementation

Specific services provided by this service unit include:

- Organizational analysis and design
- Organizational change management

• Organizational strategy alignment
  - Pay and performance alignment
  - Strategic communications
  - Organization design and development
  - Leadership development
  - Education and training

Key Products

Ernst & Young Navigator Systems Series®
Technology for Business Transformation is
a highly interactive and integrated set of
methods and tools for accessing portions of
Ernst & Young's knowledge base on leading
practices, accelerated application
development, project management and
business process reengineering.

• In February 1995, Ernst & Young
  introduced Navigator Release 3.0, which
  covers the full life cycle of business
  process reengineering and provides
  enhanced features for faster time to
  market, continuous process improvement
  through feedback cycles and better
  management of workgroups and
  workflows.

• At the core of Release 3.0 is a collection of
  integrated PC-based tools—called the
  Automated Methods Environment™
  (AME)—that allows project and process
  managers to focus on immediate tasks
  and track overall progress.

Research Centers

To deliver world-class ideas for mission-
critical business problems, Ernst & Young
Management Consulting has established
formal knowledge management functions
designed to acquire, develop and deploy the
firm's collective "brainpower" to its field
consultants and clients on a worldwide
basis.

To that end, Ernst & Young has established
several international research centers that

work closely together to capture and
disseminate knowledge.

The Ernst & Young Center for Business
Innovation (CBI) offers Ernst & Young's
consultants and clients thought leadership
on new and emerging issues and solution
approaches. The CBI brings together
leading researchers and successful
managers to produce a greater
understanding of "Horizon Three" business
issues. That is, not current state issues
(Horizon One) or pending issues (Horizon
Two), but the issues that will begin to affect
business conduct in three to five years.

The Ernst & Young Center for Business
Transformation (CBT) focuses on
developing the methods, tools, techniques
and training needed to drive and support
Ernst & Young's competencies in all
management consulting services.

The Ernst & Young Center for Business
Knowledge (CBK) is the firm's primary
consulting knowledge repository. The CBK
offers Ernst & Young consultants access to
best practices, captured internally from
professionals in the field and externally
from a myriad of sources. Other
contributions to the CBK come from
publications, systems visioning workshops
and the CBI/CBY research. The CBK
facilitates transfer of knowledge back to the
field, therefore perpetually updating itself.

The Center for Technology Enablement is
the high-technology resource and
development center of Ernst & Young. The
mission of the Center is to provide clients
with the in-depth technical expertise
needed to support the very rapid
technology-enabled transformation of
business processes. The Center maintains
world-class skills in a set of key technology
focus areas that include technology
architecture, technology management,

4

networking and distributed computing. In addition, the Center for Technology Enablement conducts research and trials of emerging technologies, advising Ernst & Young consultants of the opportunities and potential risks.

Ernst & Young Management Consulting Services has agreements/alliances with a range of vendors, including the following:

- Joining with Radius Retail Ltd. (a software developer for the retail industry) to provide North American retailers with the Retail System Architecture—a retail business management system—and assist in the reengineering and improvement of retail business operations

- Working with IBM ISSC to provide outsourcing services to Continental Bank Corp. of Chicago

- Developing a version of EY/Gems, its Global Expatriate Management Systems, for the PeopleSoft HRMS marketed by PeopleSoft

- Acting as a SAP global R/3 implementation partner

- Providing worldwide information technology and performance improvement services associated with the implementation of Baan Company's Triton enterprise resource planning client/server software product

4. Financial

Fiscal Year End:	9/30/94
1994 Total Revenue:	$1.55 B
1994 Information Services (IS) Revenue:	$570 M
1994 U.S. IS Revenue:	$425 M

Ernst & Young Consulting Services' fiscal 1994 worldwide revenue reached $1.55 billion, a 19% increase over fiscal 1993 revenue of $1.3 billion.

Approximately $570 million of Ernst & Young's fiscal 1994 revenue was derived from U.S. performance improvement and information technology services, a 27% increase over $449 million for fiscal 1993.

It is estimated that approximately $425 million of Ernst & Young's fiscal 1994 revenue was derived from U.S. information technology services.

Approximately 60% of Ernst & Young Consulting Services' fiscal 1994 revenue was derived from the U.S. and 40% was derived from international sources.

5. Strategy

Ernst & Young Management Consulting strives to achieve rapid, measurable improvements in performance through large-scale initiatives impacting people, processes and technology. The consulting practice is dedicated to:

- *Investing in new thinking*—Developing and delivering new management concepts and practices, as evidenced by the firm's research centers

- *Leadership in reengineering and business transformation*—Working with major corporations on large-scale business change initiatives, from vision through every aspect of implementation, and pioneering new practices, methods and tools to enable companies to achieve continuous innovation

- *Integrating people, processes and technology*—Addressing all the major factors of business improvement and change, including an organization's

people, processes and technology to deliver a fully integrated solution with the highest probability of success

* *Global solutions*—Offering world-class management consulting services through 8,500 professionals worldwide, with highly integrated methodologies, service lines and consulting network to ensure global business solutions for international companies

* *Rapid deployment of systems and practices*—Supporting fast, effective implementation of new systems and reengineering business practices to accelerate business change. Ernst & Young is creating a network of Advanced Development Centers nationwide to more rapidly deliver major business process and IT solutions to its clients.

* *Bringing best practices to businesses worldwide*—Through work with leading corporations and through numerous nationwide and international studies, Ernst & Young is creating a sophisticated knowledge base for best practices in use by leading businesses worldwide.

6. Competitive Position

Ernst & Young competitors include the following:

* Niche players, such as Marathon, BSG Alliance/IT, Cambridge Technology Partners, Lante and Innovative Information

* Full-service providers, such as Andersen Consulting, CAP Gemini America, Coopers & Lybrand, CSC Consulting, Deloitte & Touche, KPMG, Price Waterhouse, SHL Systemhouse and TSC.

* Other vendors, such as IBM, DEC, Hewlett-Packard, Texas Instruments, Sterling (KnowledgeWare) and QAD, Inc.

7. Recent Key Contracts

A sample of contracts awarded to Ernst & Young Management Consulting includes the following:

* Assisting in the reengineering of core processes on a global basis for a major international automotive manufacturer. These processes included new product development, order management, production, after-sale support and management. Ernst & Young was also a partner in building the infrastructure of training, knowledge management and information technology needed to support the improvement effort.

* Developing a plan for enterprise-wide (excluding manufacturing) process improvement (focused through innovation) for a leading global chemical manufacturer. Ernst & Young used its COMPASS Methodology to provide process definition, process mapping, evaluation against Best Practices, identification of improvement potential, project definition, project prioritization and implementation planning.

* Ernst & Young has helped develop an organization process and technology blueprint for the worldwide finance functions of a Fortune 50 worldwide financial services company. Eight-figure savings were identified and several reengineering initiatives were developed.

* Ernst & Young was engaged to assist a major computer manufacturer in the reengineering of its business processes in the context of SAP functionality with a particular focus on implementation speed

and support for the global nature of the business.

- Ernst & Young was engaged by a $1.5 billion mutual health care insurance company to improve customer service and position the client more competitively. Ernst & Young evaluated the current performance management system, identified a future vision of the system and developed a plan for transition to a new system, conducted education in Total Quality Management concepts, developed a network of corporate communications to reinforce and sustain desired behavior and developed a training program for change agents to support them in changing the performance management system.

8. Assessment

Ernst & Young considers its primary strengths to be:

- Speed in bringing measurable value to clients

- Offering integrated business/technology solutions

- Hardware/software vendor independence

- Strong industry skills

- Strong client/server methodology

- Easy to do business with

Challenges for the firm over the coming year include:

- Managing rapid growth

- Increasing global reach in the Far East and Latin America

- Expanding services in strategy analysis, work flow analysis and order processing

- Applying expertise in data security to the rapidly growing Internet user community

---

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

Vendor Profile

KPMG Peat Marwick LLP

Name:	Jon C. Madonna
Title:	Chairman
767 Fifth Avenue	
New York, NY 10153	
Phone:	(212) 909-5000
Fax:	(212) 909-5299

The following profile outlines the products, services and support offered by KPMG Peat Marwick LLP to its clients for systems integration and related services.

1. Description of Principal Business

KPMG Peat Marwick LLP is the U.S. organization of Netherlands-based KPMG. It is a professional services consulting firm and is one of the "Big 6" accounting and auditing firms.

KPMG offers a wide range of value-added consulting, assurance and tax services through five lines of business:

- Financial services

- Health care and life sciences

- Information, communications and entertainment

- Manufacturing, retailing and distribution

- Public services

2. Organization

The national line-of-business structure is deployed within each of ten geographic areas. The result is a matrix organizational structure that focuses primarily on the lines of business supported by the 10-area network.

Consulting personnel are further matrixed by core skill and functional expertise. This structure, while complex, allows the firm to leverage appropriate resources to deliver dynamic cross-functional teams to meet the needs of a particular client.

Internationally, the firm is working to improve consulting delivery capabilities on

a global basis through Project Globe, an initiative to establish a suite of core competencies to provide services consistently throughout the world.

Key KPMG executives are listed in the exhibit.

Exhibit
KPMG Key Executives

Name	Title
Jon C. Madonna	Chairman and CEO
Paul C. Reilly	National Managing Partner Financial Services
Ronald L. Merriman	National Managing Partner Healthcare and Life Sciences
Roger S. Siboni	National Managing Partner Information, Communications and Entertainment
William Simon	
Thomas E. Richards	National Managing Partner Manufacturing, Retailing and Distribution
Ted A. Fernandez	National Managing Partner Public Services
Keith L. Fuller	National Managing Partner Strategic Services Consulting
	Partner-in-Charge Performance Improvement Consulting Services

KPMG's consulting practice includes the following units:

• The Nolan Norton Institute provides technology research and analysis and strategy consulting. Through Nolan Norton Institute, KPMG delivers benchmarking expertise in the strategic use of information technology to achieve business objectives.

• In support of its technology consulting, KPMG maintains a network of Advanced Technology Laboratories across the U.S. offering applied technology research and development, product evaluation and leading-edge research in the application of advanced technologies such as mobile computing.

• The Strategic Services Consulting unit offers expertise in operations management and enabling technologies, such as operational improvement of time, cost and quality in clients' business operations.

3. Scope of Systems Integration and Related Activities

KPMG's overall consulting capabilities cover a range of both private and public sector client needs. Services cover strategy and financial management, operations management and information technology implementation and integration.

A typical KPMG consulting engagement involves more than a single capability—for example, strategic consulting on reengineering the finance function, followed by technology implementation of client/server software to support the reengineered function.

Major offerings across the five lines of business are as follows:

Core Skills
• Strategy and financial management—Includes strategy services covering business, product, market, organization and technology; financial advisory services, including corporate finance, mergers and acquisitions, risk management and evaluation and appraisals; and large-scale privatization

projects (through the KPMG subsidiary Barents)

- Operations Management—Services focus on improving the performance of an organization's operating functions through the integration of business process reengineering, activity-based measurement and change management.

- Technology—Services focus on solving business problems through the application of technology, including the implementation of enterprise-wide client/server packages such as SAP and Oracle; and the application of leading-edge technologies such as mobile computing and wireless and wide-area networking.

Functional Focus

- World-Class Finance—Transformation of the finance function and the role of the CFO through reengineering and technology deployment

- World-Class Human Resources—Transformation of the human resources function and the role of the HR manager through technology deployment

- Sales Force Automation—Transformation of the sales and marketing process through reengineering and the deployment of mobile computing technology

- World-Class Information Technology—Transformation of the IT function and the role of the CIO through reengineering and technology deployment

- Supply Chain—Transformation of the unique functions of targeted industries

KPMG forms alliances to either expand/enhance the firm's expertise or service offerings, or to provide the company entry into new or emerging markets. Sample alliances include those with:

- Leading software providers such as SAP, Oracle and PeopleSoft to implement enterprise-wide client/server solutions

- Major hardware vendors such as the alliance with Apple Computer to develop business applications for the hand-held Newton

- In the public services arena, with Education Alternatives, Inc. to provide financial solutions and outsourcing to schools managed by the company

- Software provider Siebel Systems, to implement marketing and sales force automation systems

4. Financial

Fiscal Year End:	9/30/94
1994 Total Revenue:	$6.1 B
1994 Worldwide Information Services Revenue:	$505 M
1994 U.S. Information Services Revenue	$225 M

KPMG's total worldwide revenue for fiscal 1994 was approximately $6.1 billion, compared to approximately $6.0 billion in fiscal 1993.

KPMG's worldwide consulting revenue was $990 million in fiscal 1994, compared to approximately $880 million in fiscal 1993.

KPMG's worldwide information services revenue was $505 million in fiscal 1994.

Approximately 31% ($1.9 billion) of KPMG's fiscal 1994 revenue was derived from the U.S. and 69% ($4.2 billion) from international sources.

With the U.S. fiscal year ending June 30, 1995, KPMG announced that its consulting revenue was up 37% in fiscal 1995. The fiscal year ends September 30, 1995 for KPMG, as a whole.

In fiscal 1994, approximately 50% of KPMG's consulting revenue was derived from the U.S. and the remaining 50% from international sources.

In 1994, approximately 45% ($225 million) of KPMG's information services revenue was derived from the U.S. and the remaining 55% from international sources.

5. Strategy

KPMG's strategy is to help clients improve their business performance through a global network of industry professionals who anticipate issues and develop creative solutions. To meet this goal, the firm believes that today's clients must have access to a team of professionals who, together, offer:

- Breadth and depth of experience in the industry in which the client competes

- Understanding of the functional operation of the client's business

- Core skills in three areas—strategy and financial management, operations management and technology

KPMG has moved aggressively into the information technology (IT) consulting market. As part of its efforts to capture a dominant share of this growing market, KPMG acquired a SAP consulting firm (Setac), which gave KPMG immediate access to consultants with experience in SAP implementations.

KPMG views industry specialization as an essential component of the firm's full-service strategy. The firm develops services within the various industry groups it targets.

KPMG's strategy is to use alliances selectively to enhance its own capabilities and improve its response times. Through these alliances, the firm offers clients a full range of high-quality systems integration services, industry- and technology-specific expertise and faster delivery of technology needs.

KPMG's marketing strategy is to target selective markets. KPMG surveys 100% of its clients in an effort to continually improve client satisfaction by meeting or exceeding expectations. The company has successfully leveraged this initiative in its marketing efforts.

6. Competitive Position

In consulting, KPMG competitors include the other members of the "Big Six," large professional services firms, strategy firms that are moving into implementation and hardware vendors offering professional services.

Specifically, KPMG competes with Andersen Consulting, Ernst & Young, Coopers & Lybrand, Deloitte & Touche, Price Waterhouse, Computer Sciences Corporation, Electronic Data Systems, Digital Equipment Corporation and International Business Machines (IBM).

7. Clients

A representative list of KPMG's clients includes:

- American General
- Apple Computer
- Black and Decker
- Blue Cross and Blue Shield
- Boeing
- Bristol Myers Squibb

- Chase Manhattan
- Chrysler
- Dupont Merck
- Emory University System of Health Care
- Hewlett-Packard
- Hoechst Celanese
- McGraw-Hill
- North American Van Lines
- Pacific Bell
- Pepsi-Cola
- R.R. Donnelley
- Ryder Systems
- Salomon Brothers
- State of Michigan
- U.S. Department of Agriculture
- U.S. Army
- Union Carbide
- Xerox

8. INPUT Assessment

Some of KPMG's strengths include:

- A high level of technical and management expertise

- Strong alliances that expand/enhance the firm's offerings

- A strong set of tools and methodologies

- Vertical industry knowledge

Challenges over the coming year include:

- Capturing a major share of the information technology consulting market

- Given the competition in the industry for talent, attracting the "right" professionals—experienced consultants with functional expertise and core skills in strategy consulting, operations improvement and technology

- Further leveraging the intellectual assets of the firm through additional investment in technology-based tools

If you have any questions or comments on this profile, please call your local INPUT organization or Wilson Haddow at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, (415) 528-6311.

April 1994

Electronic Data Systems (EDS)

EDS

Chairman, President & CEO:	Lester M. Alberthal, Jr.

7171 Forest Lane
Dallas, TX 75230

Phone:	(214) 604-6000
Fax:	(214) 605-6545

Status:	Wholly-owned Subsidiary
Parent:	General Motors Corporation
Employees:	70,000 (12/93)
Revenue:	$8,561,800,000
Non-GM Revenue:	$5,222,700,000
Information Services Revenue:	$8,507,300,000
FYE:	12/31/93

1. Key SI Contacts:

Corporate Business Development:
  Gary J. Fernandes, Senior Vice President

Manufacturing, Warehousing and Distribution Segment:
  Hartmut Burger, Vice President

Federal Government Segment:
  George Newstrom, Vice President

International and Global Industries Segment:
  Mal Gudis, Vice President

2. Description of Principal Business

Electronic Data Systems (EDS) was originally founded in 1962 by Ross Perot to provide systems operations services to insurance companies, government-funded health insurance programs and financial institutions. Today it provides systems management, systems integration (SI), consulting, systems development and processing services to

BIAR

nearly all vertical industries. In addition, EDS may act as a fiscal agent for a client and take full responsibility for data processing as well as other administrative duties, such as paying and processing insurance claims.

EDS is among the leaders that provides SI to the federal government. The company entered the commercial SI market in the early 1980s, and continues to gain experience and a substantial lead in this area.

EDS was acquired by General Motors (GM) in 1984 and operates as a wholly-owned subsidiary. EDS provides virtually all information processing services to GM.

EDS, however, has access to the public capital markets with approximately 44% of EDS capital stock (GM Series E) being sold to the public. At the current market price of publicly-traded GME shares, EDS is valued at close to $15 billion, including the portion of EDS owned by GM.

3. EDS Competitive Position

EDS is the largest systems operations and processing provider in the world with worldwide 1993 revenues of $8.5 billion and a net income of $724.0 million. Approximately 39% of EDS's current revenues are from captive GM business. This percentage has spiraled downward over the past 10 years from the 59% level. The remainder of EDS' revenues is from systems operations and other professional services for outside clients.

EDS's SI revenues in 1993, estimated at close to $1.2 billion, have made EDS the fourth largest provider of SI services among U.S. vendors.

EDS has a strong set of information services capabilities and resources—including consulting, development, SI and systems operations. Its operational data processing experience, that develops and operates large and small data centers, makes it a real "pro" in efficient and cost-effective use of technology. EDS systems operations experience with insurance, financial, transportation and energy companies, among others, also provides the company with a strong applications knowledge of such industries. The delivery of information systems (IS) responsibility for GM provides real business experience in manufacturing, retail, distribution and networking. In addition, its alliance with GM Hughes provides it with aerospace industry knowledge.

The major competitors of EDS in the areas of SI are: Andersen Consulting, CSC, IBM, ISSC and CAP GEMINI.

4. Organization

In the fourth quarter of 1992, EDS restructured its organization to focus more on the customer at the center of the company's structure. The change reinforced its focus on individual industries and business needs rather than product lines or technologies.

The organization features four components, summarized in Exhibit 1.

Exhibit 1

Electronic Data Systems Corporation Organizational Components

Component	Group	Unit(s)
Industry	General Motors	Planning and Integration; GM Europe; Advanced Technology; Powertrain and Delco Electronics; North American Vehicle Sales and Marketing; Dealer Systems; Worldwide Components; Operations and Staffs Support; Allison Transmission, AGT and Electro-motive: N.A. Passenger Car & Truck Platforms; Regional Support Centers
	Manufacturing	Manufacturing and Distribution; High Technology
	Financial	Large Financial Institutions; Small Financial Institutions; GMAC
	Transportation	Transportation
	Communications	Communications
	Energy	Energy
	Insurance	Health; Property & Casualty; Life
Geography/Culture Americas	U.S.	Government—Federal; Government—Military; Government—State and Local; Commercial Services
	Non U.S.	Canada; Mexico; South and Central America
Geography/Culture Europe	Europe—Central Europe—North Europe—South	Germany U.K.; Benelux and Scandinavia France; Spain and Italy
Geography/Culture Asia/Pacific	Japan	Japan
	Asia/Pacific	Korea; Australia and New Zealand; Taiwan; Hong Kong; China; Singapore

Exhibit 1 (Cont.)

Electronic Data Systems Corporation Organization Components

Component	Group	Unit(S)
Infrastructure	Administration	Chief Information Office; Employee Administration; Purchasing; Real Estate
	Business Development	Americas; Asia/Pacific and Japan; Europe
	Centers of Service	Core Capabilities; Electronic Commerce; Shared Services; Technical Products; Unigraphics
	Consulting	—
	Customer Business Services	Account Services; Field Services
	Employee Development	Compensation; Industry Training; Leadership Development; Quality; Staffing; Technical Development
	Infrastructure Engineering	Applied Engineering; Core Engineering
	Market Development	Marketing; Marketing Support; Sales Leadership; Strategic Planning
	Operating Services	Operating Services—Client/Server; Operations; Operations—Europe
	Research & Development	—
	Technology Architecture	Infrastructure Planning; Systems & Methods; Technology Architecture—Client/Server
Corporate	Audit; Communications & Public Affairs; Controller; Government Affairs; Legal; Tax; Treasurer	—

Exhibit 1 included the following components:

- Industry: Strategic Business Units (SBUs) organized by industry

- Geography/Culture: SBUs organized along geographic lines

- Infrastructure: Strategic Support Units (SSUs), such as IMC Operations, Field Services and Applied Engineering, with additional support units in employee development, purchasing, marketing, planning and consulting

- Corporate: Administrative support for SSUs

There are three levels of corporate governance within each of the four above components as follows:

- Unit: The SBU and SSU levels are the most significant because they are closest to the customer. SBUs functions include marketing and business development, sales and sales support, systems engineering, products and services, business operations and financial responsibilities. SBUs are responsible for working with other SBUs and SSUs to find resources, products and services that best meet customers' needs.

- Group: Group Executives develop five-year business plans, coordinate marketing and selling functions and monitor and enforce teamwork, as well as quality and customer satisfaction. In the Industry, Infrastructure and

Corporate components, Group Executives are responsible for developing global strategy within their areas. Group Executives in the Geography/Cultural component are responsible for the strategy within their region.

- Global Operations Council: The most senior executives in global industries have the responsibility for market planning and direction. The Council will link business strategies among industry SBUs and geography/culture SBUs.

The Leadership Council remains the company's policy-setting body.

Centers of Service:

The Centers of Service (COS) program, introduced in 1992, is a new dimension to EDS business pursuits. While the SBUs continue to concentrate on their specific industries, the COS provides specialized products and services horizontally to multiple SBUs. Sometimes, an SBU will sell a company service. In other cases, the company service will go directly to the customer with the SBU sales force. There are currently six COS, as follows:

- Customer Services Technologies: Enhances EDS' production by creating and operating customer assistance centers for GM and others, and provides everything from computer systems and equipment, to facilities and assistance center staff.

- Business Process Systems and Services: Focuses on integrating business processes, people and

technology to automate paper-intensive processes such as claims processing and customer correspondence.

- Human Performance Services: Provides a range of training services, from standard classes to custom-designed formats.

- Electronic Commerce: Includes two operating units, Electronic Financial and Information Transaction (EFIT) Services and Card Processing Services (CPS) that process transactions initiated by ATM/debit cards, MasterCard, VISA, JCB and private label cards.

- Unigraphics: Represents its CAD/CAM product line. Unigraphics' distribution channels extend across multiple SBU areas.

- Technical Products Division (TPD): Provides a desktop system services program and is one of the top 10 microcomputer resellers in the U.S. Equipment from all major vendors is offered, including Apple, Compaq, DEC, Dell and IBM. Services include hardware, software, education and training, consulting, support services, client/server and LAN solutions, management services, SI, installation and maintenance and help desk solutions.

When interviewed, the EDS organizations that address most SI opportunities, responded quite differently as to their organization in executing and managing SI contracts. This is illustrated in Exhibit 2.

Exhibit 2

Centralization/Decentralization of SI Business Functions, Electronic Data Systems

Responsibilities	Commercial	Federal
Strategy and long-range planning	D	B
Marketing and promotion	B	B
Account management/ sales	B	D
Contract review/approval	C	C
Project management/ control	B	B
Implementation/ development	B	D
Hardware/software acquisition	C	C
Systems operations	C	C

C = Centralized, D = Decentralized, B = Both

The Government Systems Group: Operates in a decentralized mode, with the exception of hardware and software acquisition and centrally controlled systems operations. Commercial organizations have been more centrally controlled, with the exception of strategy and long-range planning, project management and implementation and development that is controlled from Dallas. These three responsibilities were shared by Dallas and decentralized locations. The major reason for the differing responses is the result of contrasting customer requirements and

the commercial organizations' proximity to EDS corporate headquarters.

As EDS's new organization unfolds with its focus on more autonomy and delegation of decision authority, INPUT anticipates commercial organizations will become much more decentralized.

5. Key Products and Services

EDS' traditional area of information services concentration has been systems management. However, in recent years the company has significantly expanded its participation in other major areas of the information services industry, such as SI, systems/application development, consulting services and process management. This has significantly increased the company's capability to provide a full-cycle information services program to potential customers. In addition, there is more overlap in the definition of contracts by various

product/service sectors. For example, many times, a contract involves a variety of SI services (including application development and consulting) as well as a systems management component.

There has been major growth in the company's consulting business—estimated to have increased several hundred percent over the past three years.

A major strength of EDS is its ability to provide a full life cycle SI delivery program to its large, private international data network that, in turn, strengthens EDS' competitive position in marketing network-based solutions and services on a global basis.

EDS' definitional approach segmenting its various revenue streams is outlined in Exhibit 3.

Exhibit 3

Electronic Data Systems Corporation, 1993 Source Of Revenue ($Millions)

Service	U.S. ($)	International ($)	Total ($)
Systems Management	3,720	854	4,574
Systems Integration	949	266	1,215
Systems Development	688	318	1,006
Consulting	287	128	415
Product	366	255	621
Process Management	423	68	491
Other	117	68	185
TOTAL	6,550	1,957	8,507

EDS's definition of its SI product and services offerings differs slightly from INPUT's definition of the SI product/service sector. INPUT includes within the category of SI (when there is total project management risk responsibility), professional services, such as consulting and education, application development, system implementation and life cycle support (systems operations/management and/or maintenance).

Based on EDS's publicly-reported revenue definitions, SI represented 14% of total company revenues in 1993. If systems development and consulting revenues are added to the reported SI revenues, EDS' SI revenues represented close to 31% of total company revenues in 1993.

Usually, systems integrators work with independent software products vendors to provide the software application for a particular SI project. However, EDS is one of the SI vendors that provides many core applications software solutions for various industry-specific markets from internally developed and/or acquired companies.

EDS' definition of its various information services programs, as included below, can, in effect, be nearly subsumed under INPUT's definition of a life cycle SI product and services offering. However, its systems and process management programs, when not offered as part of SI life cycle projects, can be classified under the product/services sectors category of systems operations.

6. Markets Served

EDS has traditionally had a marketing approach focused on vertical industries. Current focus is on the following vertical markets:

- Communications

- Federal government

- Discrete and Process Manufacturing

- State and local governments

- Banking and finance

- Insurance

- Health and Benefits

- Energy/Utilities/Chemical

- Retail

- Transportation

EDS has also been very successful in penetrating the international markets, as indicated in Exhibit 4, that outlines the company's revenues in 1993 by market sector.

Of EDS' estimated 70,000 employees, more than 16,000 work outside the U.S with nearly 850 locations worldwide. Many employees have skills and knowledge applicable to SI, however, INPUT has not attempted to estimate the precise number of personnel. Systems development and implementation are areas with the highest percentage of SI personnel.

Exhibit 4

Revenue by Market Sector
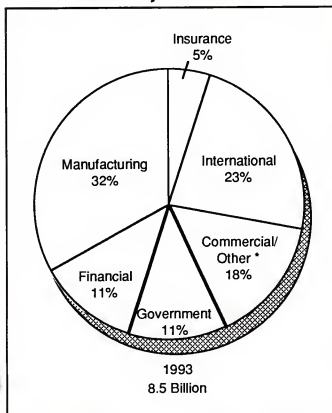
Commercial/other primarily includes health services, retail trade, energy, communications and transportation

The following is a summary of EDS' SI services by industry market:

Government:

EDS provides SI services to federal, state and local government customers.

More recent federal government SI contracts include the following:

- In 1993, EDS signed a three-year cost reimbursement contract to participate as a mentor firm in the Department of Defense Mentor-Protegé program. EDS will work closely with its designated

protegé firm, Soza & Company Ltd., in four key areas: business management, advanced training technologies, process redesign and business development.

- In 1993, EDS' Government Services SBU signed a five-year, time and materials contract to provide maintenance and technical services to the U.S. Customs Service. EDS will conduct maintenance site surveys and perform quality assurance and inspection services in the Washington, D.C., Detroit and Dallas areas.

- In 1993, EDS signed a contract with Zenith Data Systems to provide microcomputer software, documentation, upgrades and support to the U.S. Department of Defense (DoD) as part of Desktop IV, a personal computer contract. EDS will be the sole provider of DOS Microsoft applications software.

EDS's State and Local Government SBU, headquartered in Hendon (VA) with 4,700 employees, provides consulting, systems development, SI, systems management and process management services to various governmental agencies in 27 states and the District of Columbia. The company has more than 100 local-government customers nationwide and supports a range of areas, from health care and human services, to transportation, justice, education and the environment.

- EDS currently provides Medicaid claims-processing services for 18 states and processes more than two-thirds of all Medicaid claims submitted in the U.S. EDS also supports states' managed-care initiatives.

- Clients added in 1993 include the cities of Dallas and Indianapolis for new parking enforcement systems; New York City Department of Transportation; City of Auburn Hills, Michigan; Los Angeles County Department of Public Social Services; and the state of West Virginia.

- Also in 1993, EDS signed a contract with TaxNet Governmental Communications Corp. (TGCC), a non-profit organization of state revenue departments, to develop a streamlined tax filing system for businesses by eliminating paper returns.

Banking and Finance:

EDS offers financial institutions a suite of industry-specific offerings and professional services designed to assist clients in areas from strategic planning to process design, to implementation and management. The company provides IT-based business solutions to more than 5,000 financial services organizations worldwide.

Recent acquisitions include BEI Golembe and Ampersand, Inc. to enhance the company's SI role in consulting and client/server-based technology for branch sales and service delivery.

Recent SI projects include:

- Installation of EDS' Strategic Banking System for U.S. Bancorp throughout its operation.

- First Union Bank, Charlotte, NC and BACOB Savings Bank, Belgium, to install EDS' secondary mortgage system.

- Republic Bank of New York to integrate an enterprise-wide communications network.

Insurance and Health Care:

EDS provides a range of services to commercial insurance companies and managed care organizations.

More recent SI contracts include the following:

- In early 1993, EDS was awarded a three-year contract with Blue Cross and Blue Shield of Texas to install and upgrade its Medicare claims processing system and provide ongoing consulting and maintenance.

- In 1993, EDS' Energy Division signed a 12-month contract with Johnson and Johnson's LifeScan unit to provide software design, development and implementation. EDS is also designing and developing LifeScan's Customer product Quality Services system, to handle customer service queries.

- In 1993, EDS was selected by San Francisco-based Axion Pharmaceuticals to develop and implement client/server technology to

© INPUT 1994. Reproduction prohibited.

provide services to physicians who treat cancer patients. EDS will provide Axion with internal financial, accounting and order-management systems designed to eliminate the paper associated with current fax and mail orders.

- EDS will provide an imaging and intelligent character recognition (ICR) system for Sanus Corp. Health System, a managed care company. This is the first imaging and ICR agreement EDS has signed with an HMO, and adds to EDS's existing imaging and ICR systems at several Blue Cross and Blue Shield Plans.

Retail:

The Retail Services Division, part of the Commercial Services SBU, provides business and IT products and services to retailers in the department, specialty apparel, drug, convenience store, food and beverage and discount and wholesale club segments.

- In 1993, EDS entered into a strategic alliance with Southland Corporation, the world's largest convenience store retailer, NCR (now part of AT&T Global Information Solutions) and Canmax. The pact will provide 7-Eleven stores in the continental U.S. and Canada with network services that support 7-Eleven business functions such as logistics and supply chain management.

- EDS customized, integrated and installed credit application processing systems for the Zale Corporation, Profitt Jewelers, Sterling, Inc. and Daniel's Jewelers to link with credit bureaus for on-line credit approval.

- In 1992, EDS was awarded a systems development and maintenance agreement by Montgomery Ward. Under the agreement, EDS assumes full responsibility for developing and implementing fully integrated retail applications.

Communications:

This unit serves the telecommunications, cellular, cable, entertainment, multimedia and publishing industries. Products and services include industry-specific offerings such as billing, customer information, customer service, operator support services, cellular intercarrier services and cellular management information system/billing services.

More recent examples of SI contracts include the following:

- In 1993, EDS completed a one-year SI project for Dow Jones which implemented a client/server environment for expanding its electronic mail and office automation needs with a new router-based communication solution.

- In 1993, EDS signed a six-month feasibility study of the operational support systems for A/O Intertelekom, the long-distance telecommunications carrier for the Commonwealth of Independent States. EDS will conduct a feasibility study of the operational support systems requirement for A/O

Interteklekom's domestic and international operations.

- In 1993, EDS Communications Industry Group signed a five-year contract with BellSouth Telecommunications to provide a work-force management system to be used by three BellSouth groups. The contract incorporates conversion, implementation and support activities, as well as an upgrade to a new UNIX client/server version of the product.

- In 1993, Sprint selected EDS to enhance and integrate Sprint's Customer Invoice Management Systems, a local exchange billing system.

Transportation:

The Transportation Group, with approximately 2,000 employees worldwide, provides SI and management, as well as IT products, to the airtransport, travel, freight and fleet markets.

- In late 1993, EDS signed an agreement with Southwest Airlines Company to develop a new passenger revenue accounting system. Under this agreement, EDS develops the system, supplies related hardware and provides system training. The system will be marketed by EDS to other airlines under the name EDS*PRAS.

- In 1993, EDS was selected by Celebrity Cruise Lines, Inc., the fourth largest cruise fleet in the world, to design, develop and implement a new cruise line reservation system. In addition, EDS will migrate Celebrity's existing

systems to a client/server, open-systems platform.

Energy / Utilities:

The Energy/Chemical Group provides SI and IT to petroleum, natural gas, mining, chemical, pharmaceutical, environmental and electric utility customers.

- In early 1993, EDS signed a one-year contract with Du Pont's Polymer Division to provide SI of hardware and software for new order management, shipping and warehousing systems and processes.

- In early 1993, EDS signed an SI contract with Lagoven, S.A. a subsidiary of Petroleos de Venezuela, S.A. (PDVSA) for the customization and installation of existing third-party software at selected customer sites in Venezuela.

- In 1993, EDS and Data Marine Systems Limited were awarded a contract by British Petroleum Exploration (BPX) to provide IT support services and offshore communications.

Manufacturing:

EDS's SI manufacturing expertise encompasses a range of discrete and process manufacturing markets, including aerospace and defense, automotive, distribution, heavy machinery, food processing, instruments, high technology, electrical/electronic equipment and primary metal industries.

© INPUT 1994. Reproduction prohibited.

More recent SI contracts include the following:

- In 1992, EDS signed a new five-year contract with GM, primarily a systems management/operations contract. However, a major new element of the contract is an emphasis on business process re-engineering.

- In 1992, EDS' Technical Products Division signed an agreement with Memorex Telex N.V. to manage product integration and distribution processes for desktop systems in North America.

- In early 1993, EDS was awarded a systems development contract by Allied Signal to develop and implement a system that accesses worldwide information on suppliers, contracts, parts and commodities using a client/server-based repository.

- EDS has a systems development and support agreement with Baxter Diagnostics to develop, test and implement a quality management system.

- EDS was selected by Nestle USA to manage the migration of Nestle's corporate data processing center from Los Angeles to Tempe.

- EDS installed an integrated client/server solution for Del Monte's manufacturing plants that provides access to regional database information resources.

International:

Recent SI contracts include the following:

- In Britain, EDS-Scion won a contract with London Underground Limited to provide technical support to the centrally controlled, train-arrival and service-status system for London Underground's Central Line.

- In 1992, EDS was selected by Polska Telefonia Komorkowa, the consortium responsible for building Poland's national cellular network, to provide the information management and billing system for the project.

- In 1993, in Japan, EDS signed a re-engineering consulting contract with Mitsubishi Corporation under which EDS will study and document the flow of information through the Special Steel and Wire Section of Mitsubishi's Corp.'s Domestic Sales Division.

- In 1993, EDS's Northern Europe SBU signed a Business Information Planning (BIP) and systems development/integration contract with Fortifikationsforvaltningen (FortF), the largest real estate owner in Sweden. FortF has ownership and maintenance responsibility for all defense-related land, buildings and military bases in Sweden.

- In 1993, EDS signed a five-year, systems-development and integration agreement with VDAB, the Belgian government agency responsible for dealing with issues such as unemployment, re-employment and retraining. EDS will design and

implement a client/server architecture linking all VDAB offices that, when completed, will be the largest client/server operation in Belgium.

GM:

EDS' GM revenue comes from designing, installing and operating GM IS and supports the automaker's large, private digital telecommunications network.

Exhibit 5 shows the typical duration of EDS SI contracts (combined federal and commercial), based on the total percentage of SI contracts.

Exhibit 5

Duration of EDS' Systems Integration Contracts

- Over 10 years 11%
- 7 to 9 years 14%
- 1 to 3 years 51%
- 4 to 6 years 22%
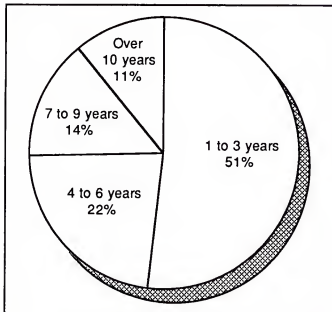
7. SI Objectives and Revenues

EDS's business objectives are identified in Exhibit 6. Management has set a goal to reduce its dependence on GM business to 30% by 1994. It is attempting to accomplish this by holding GM-derived revenues level, while increasing

traditional non-GM SI revenues by approximately 20%.

Exhibit 6

EDS Business Objectives

- 20% SI growth from non-GM sources
- 80% renewal rate
- SI as a source of systems operations contracts
- Control of existing customer base

Moreover, EDS has a business objective of maintaining a client renewal rate in excess of 80%. It is offering SI in response to its customers' demands, and recognizes SI as a vehicle to attract new systems operations candidates and maintain control over its existing customer base.

8. Internal SI Capabilities Evaluation

- Business Consulting: EDS has good consulting experience in large project development and technical consulting capability. Vertical-industry business consulting capability should be particularly strong in its base businesses—process and discrete manufacturing, retail and distribution, aerospace and networking—all areas of SI concentration. EDS' new organization should improve its knowledge of additional vertical industry markets.

- Design Methodology, Design and Integration, Project Management, Software Development, Education,

Training and Documentation: Based on the experience gained in its basic systems operations business and at GM, EDS is very capable in all of these areas.

- Packaged Systems Software: The company prefers to use off-the-shelf products provided by other vendors.

- Standard Computer Hardware: EDS uses standard off-the-shelf hardware provided by other computer manufacturers.

- Custom Computer Hardware: EDS indicates it has some custom hardware capability, but would clearly prefer to use off-the-shelf hardware.

- Network Management and Operations: EDS has extensive experience in developing and managing GM networks, as well as its own, that supports its processing services capability. Today EDS operates one of the largest networks in the world.

- Service and Repair: EDS has moderate capability in hardware service and repair.

- Software Maintenance: The company has adequate software maintenance capability.

9. SI Strategic Alliances and Acquisition Activity

EDS has developed ongoing relationships with more than 5,000 vendors worldwide for product resale, application development and other technical capabilities. The company has also acquired/and or invested in a number of companies to gain technical and industry expertise. Examples of these acquisitions are shown in Exhibit 7.

Exhibit 7

EDS-Significant Acquisitions 1991-1993

1991-	SD-Scicon
1991-	McDonnell Douglas Systems Integration Company
1992-	mbgh Software & Systems (Germany)
1993-	Energy Management Associates
1993-	Ampersand Corporation
1993-	BEI Golembe
1993-	TWP/Businessland Canada

Equipment alliances have been established with leading vendors, including IBM, AT&T/NCR, Tandem, DEC, Sun and Apple. The Tandem alliance includes a strong focus on the manufacturing industry. EDS's alliance with GM Hughes is focused on factory automation and telecommunications applications that require satellite-based products and services.

Customer partnerships, such as the EDS Banc One Corporation & Norwest Corporation alliance are used to develop application offerings in areas where EDS lacks applications skills.

Software alliances, though small in number, have provided solid gains for EDS in the telecommunications market.

EDS has established a number of international alliances.

Examples of some more recent alliances and investments, highlighted in Exhibit 7, include the following:

• In 1991, EDS acquired SD-Scicon, a then, $470 million company, that substantially increased EDS's base of global SI customers. SD-Scicon brought to EDS, expertise in consulting, systems development, as well as facilities management.

• In 1991, EDS acquired McDonnell Douglas Systems Integration Company (MDSI). Included in the MDSI acquisition, were the Unigraphics and Graphics Design System (GDS) product lines and Shape Data, a solids modeling research and development company based in Cambridge, England.

• In 1991, EDS acquired Creative Software Systems, Inc. (CMS) of Toms River, New Jersey. CMS provided information management services to the cable TV industry, including subscriber and financial management systems, bill processing and mailing services.

• In 1992, EDS acquired a small equity interest in mainframe software maker, 4th Dimension Software Ltd., in Costa Mesa, CA.

• In 1992, EDS acquired mbp Software and Systems, Germany's oldest IT service and software company. The acquisition brings EDS broader knowledge in the areas of production-

control technology in the steel, chemical, manufacturing and energy industries.

• In 1992, EDS acquired Cummins Cash and Information (CCIS), a subsidiary of Cummins Engine Co. CCIS is a leading provider of IT services to the trucking industry.

• In 1992, EDS signed an agreement with The Freedom Group (TFG), a provider of insurance industry software systems and services. This alliance combines TFG's property and casualty software products and third-party administration experience with EDS' consulting, SI and systems management expertise.

• In 1993, EDS purchased shares in Enron Corp., a leading natural gas company that operates a natural gas transmission system; markets natural gas liquids, crude oil and fined products worldwide, and owns 84% of Enron Oil & Gas Company, a large independent natural gas exploration and production company.

• In 1993, EDS acquired an equity interest in Japan Systems KK, a publicly-held corporation providing SI, software development, communications systems and hardware to the Japanese market. The company serves customers in a wide variety of industries, including, manufacturing, utilities, telecommunications, financial and government.

• In 1993, EDS acquired Atlanta-based Energy Management Associates (EMA). EMA provides planning software and regulatory and management consulting to the electric and gas utilities industries.

• In 1993, EDS acquired Ampersand Corp. of York, PA. Ampersand develops and installs open-systems-based branch automation products for financial institutions, employing client/server architecture.

• In 1993, EDS purchased BEI Golembe, a diversified consulting firm headquartered in Atlanta, Georgia.

• In 1993, EDS Canada acquired JWP/Businessland Canada, which provides personal computer products, integration services and after-sale support to large corporate customers.

• In 1993, EDS joined with Amdahl Corporation in the formation of the Antares Alliance Group, a joint-venture software products company. The new company offers products that enhance development time for software products and allows those products to be used on cross-platform technologies—from mainframe to desktop.

10. SI Capabilities Summary

EDS has a very strong set of capabilities and few weaknesses in the SI arena (See Exhibit 8). It has outstanding IS operating knowledge in the services industries, based on experience in running data processing installations for many clients in the banking, financial and insurance industries. It has similar experience with federal, state and local government customers.

Exhibit 8

EDS' Competitive Status

Strengths	Weaknesses
Operational experience	Systems operations/ processing mentality
Vertical industry knowledge	Limited sales office network
Large experienced skill base	Perceived lack of corporate flexibility - very structured
Understands new technologies	
Alliances	
Financial clout	
Market position	
Vast resources	
Track record	

Based on its experience with General Motors, EDS has developed operating experience in virtually all areas of large manufacturing companies, from CIM applications to the consolidation and installation of a worldwide communications network.

These actual operating experiences make EDS uniquely qualified to develop and operate total information solutions. They also provide EDS with an experienced skill base that addresses a very broad range of industry applications.

EDS lacks hardware and software products (with the exception of its ownership position in Hitachi, USA), preferring to obtain other vendors' off-the-shelf products through its strong set of alliances. INPUT does not consider this a weakness because of EDS' strong financial resources and buy-in power.

EDS has a solid understanding of new technologies and integration techniques based on its experience in running 20 or more large internal data centers and well over 100 customer site data centers.

INPUT does not believe EDS has significant weaknesses. However, its traditional systems operation focus will most likely limit its competitiveness in some SI opportunities. Some prospects, committed to running their own data processing operations, will be reluctant to ignore EDS's traditional motivations when an SI solution is proposed. This is justified, since it appears to INPUT that, in most cases, systems operations is an underlying motivation for EDS's SI activities.

EDS does not have an extensive sales office network. This may prove to be a disadvantage, as it competes with hardware manufacturers that have near-site sales personnel.

11. SI Marketing Strategy

Exhibit 9 identifies the key elements in EDS's marketing strategy. EDS wants to provide total service—from developing an integrated solution, through SI, to total systems operations—for the customer.

Exhibit 9

EDS SI Marketing Strategy

- Complete service provider
- CBroad market coverage
- CBuild on vertical industry experience

INPUT believes EDS will continue to leverage its buying power with hardware and software vendors and partners, along with industry partners having vertical-industry application knowledge.

Finally, a key element of EDS's strategy is the reference use of successful SI and systems operations contracts to accumulate new clients. The company will use its own data processing centers to demonstrate its capabilities and use satisfied customers as references.

In addition, EDS's new organization is focused on broadening its market coverage by establishing organizations responsible for solutions and growth in all vertical markets.

Communications is also expected to be a major marketing focus for EDS' SI services in the future. In addition to a major emphasis on EDI applications services, it may include an emphasis on interactive networking applications.

12. SI Customer Base

EDS has a broad range of systems operations customers. In many cases, the first stage of these contracts requires EDS to develop a total integrated system solution. The majority of its revenue,

however, comes from follow-on systems operations activities. The following table, Exhibit 10, identifies representative customers where SI is an element of the total systems operation offering. Contract values are not provided, since INPUT believes the systems operation content would make these values misleading.

Exhibit 10

**Examples of EDS's
Customers and Contracts**

Company/Industry	Project Description
State Government	Medicaid claims
First Nationwide Bank	Consolidating item processing and back-office services
United New Mexico Financial Corp.	Conversion of the company's bank data cities to EDS' integrated banking system
Bank One	Integrated large commercial banking system

13. Summary and Future Directions

EDS's broad range of operational experiences makes it a very capable competitor in the SI arena. These strengths include:

- Vertical-industry knowledge of its traditional client base as well as GM-based discrete and process manufacturing, distribution and aerospace experience

- Operational project development and technology transition management skills, based on actually running GM and EDS data centers and communications networks. This includes the capability to manage very large projects.

- A large, satisfied customer base

- Experience, financial resources and product-buying leverage provided by its strong financials and access to public capital markets. This insures its ability to add significant technical and other capacities to provide strong revenue growth.

- A focus on total systems management that allows EDS to spread initial SI risk over a longer time period and revenue stream

This last strength, a preoccupation with providing total systems management, may also turn out to be EDS' one major weakness. As a weakness it can:

- Lower EDS's priority on bidding on SI-only projects

- Preclude EDS from serious consideration by the SI customer that wants an integrated solution only, not a systems management contract.

INPUT believes EDS will continue to move toward the total systems management concept, deriving its revenues not only from front-end SI work, but also from follow-on systems operations contracts. The company will be extremely successful in systems management contracts, but will need to

continue to focus more on front-end consulting capabilities, such as business process change, to obtain strong, continued growth from standalone SI contracts. Internationally, EDS is showing strong growth in the consulting and systems development areas.

Company Profile

May 1994

Technology Solutions Company (TSC)

| Chairman & CEO: | William Waltrip |
| President & COO: | John T. Kohler |

205 North Michigan Ave.
Suite 1500
Chicago IL 60601
Phone: (312) 819-2250
Fax: (312) 819-2299

TSC

*DELIVERING
BUSINESS BENEFITS
THROUGH TECHNOLOGY*

Description of Principal Business

- TSC provides solutions for its clients business problems through the application of computer technology. Technology Solutions provides a comprehensive package of services to design, develop and implement complex, major computer system projects for Fortune 1000 companies. Substantially all of Technology Solution's 1993 revenues derived from system integration contracts.

- TSC provides systems integration services such as:

  - Feasibility studies
  - Business case justification
  - Project management
  - Logical and physical systems design
  - Hardware and software selection
  - Programming
  - Implementation
  - Change management
  - Training
  - Benefits realization

BIPR

TSC Competitive Position

- The systems integration market is highly competitive and includes the following types of companies:

  - Systems consulting and implementation

  - Contract programming companies

  - Application software firms

  - Facilities management companies

  - Big Six accounting firms

  - General management consulting firms

- TSC competes more frequently with Anderson Consulting for major systems integration contracts than with any other single firm.

- Other well known competitors in the system integration market with substantial financial, technical and marketing resources include:

  - Anderson Consulting

  - Computer Sciences Corporation (CSC)

  - Electronic Data Systems

  - Perot Systems

  - SHL Systemhouse, Inc.

  - Unisys

  - Digital Equipment

  - Martin Marietta

- TSC believes that the length of industry and consulting experience of its project managers and other consultants as well as the promotion of software products owned by competitors, are important competitive factors within the system integration industry.

- TSC focuses on major corporate projects because of their size and complexity. The replacement and re-engineering of legacy systems provide TSC with growth potential within the systems integration market. Such projects may also generate follow-on work within the same organization.

- TSC's project managers provide the expertise to manage major, complex and integrated commercial projects in conjunction with TSC's industry-specific consulting staff. TSC relies upon active client involvement throughout the project.

- TSC believes that its client/server and application software experience will be important considerations for clients seeking systems solutions in the future.

Markets Served

- TSC has focused on the following industry and application areas:

  A. Consumer Products

  - Packaged Goods
  - Pharmaceutical/Health Care

Technology Solutions Company

- Retails
- Textile and Apparel

B. Customer Contact Systems

- Customer Service Centers
- Telecommunications
- Media (Publishing and Advertising)
- Direct Marketing
- Wireless Communications

C. Financial Services

- Capital Markets
- Investments Management Services
- Insurance
- Retail and Commercial Banking

D. Products

- Commercial Manufacturing
- Engineering
- Distribution and Logistics
- Aerospace and Defense

Recent Events
- In February 1994, John T. Kohler was promoted to President and Chief Operating Officer

TSC Organization
- The central management of TSC consists of:

  - William H. Waltrip, Chairman and CEO

  - John T. Kohler, President and Chief Operating Officer;

  - Paul J. Cosgrave, Executive Vice President

  - James Carluccio, Executive Vice President

- The Board of Directors has been realigned to consist of all outside members with the exception of Chairman and CEO, William Waltrip.

- TSC has a flat organizational structure with senior management working in close contact with TSC consultants by placing project managers at the vice president level.

- Exhibit 1 provides a summary of key organizational units and contacts within TSC.

SI Revenues
- During fiscal 1993, TSC had 18 client engagements that provided revenues in excess of $1 million each, compared with 14 such engagements in 1992. Also, 53 major client engagements accounted for essentially all of TSC's revenues, compared with 46 such engagements in 1992.

- During 1993, revenues declined 12% from $70.1 million to $62.5 million. The decline primarily resulted from a $23.9 million decrease in Manufacturing revenues. This decline was the result of contract cutbacks in the aerospace and defense portion of its manufacturing sector.

- Net income declined 53% from $12.1 million to $5.7 million in 1993.

Exhibit 1

TSC Organization

```
                    ┌─────────────────────┐
                    │  Chairman and CEO   │
                    │  William H. Waltrip │
                    └─────────────────────┘
   ┌──────────────┐   ┌──────────────────┐   ┌──────────────────────┐
   │ Executive VP │   │ President & COO  │   │ Exec VP & Consumer   │
   │ Paul J.      │───│ John T. Kohler   │───│ Products Practice    │
   │ Cosgrave     │   │                  │   │ James S. Carluccio   │
   └──────────────┘   └──────────────────┘   └──────────────────────┘

┌────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────────┐
│    CFO     │ │ General      │ │ Products     │ │ Financial        │
│ Martin     │ │ Counsel      │ │ Practice     │ │ Services         │
│ "Tork"     │ │ Paul R.      │ │ Jack Hayden  │ │ Practice         │
│ Johnson    │ │ Peterson     │ │              │ │ Emmitt Zahn      │
└────────────┘ └──────────────┘ └──────────────┘ └──────────────────┘
```
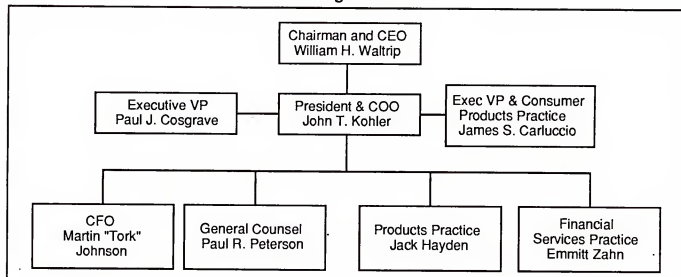
Source: TSC

- The five year fiscal summary is as follows (all figures shown in millions of dollars):

Date	Revenue	Net Income
1993	62.5	5.7
1992	71.0	12.1
1991	52.5	8.5
1990	43.9	3.2
1989	14.8	0.8

- During fiscal 1993, professional fees accounted for $62 million, with hardware and software sales accounting for approximately $445,000.

- Revenue declined between 1992 and 1993 because of the loss of its largest 1992 client. The company will not identify the client.

- In the first quarter of fiscal 1994, TSC had an operating margin of 16%.

- Revenue by industry sector was derived approximately as follows:

  - Consumer Products   60%
  - Financial Services   28%
  - Manufacturing   12%

- TSC's five largest clients accounted for 12%, 9%, 9%, 8% and 7% of total revenues respectively.

- TSC contracts typically last about one year but many clients produce revenues longer than one fiscal year.

Internal SI Capabilities Evaluation

- TSC's 317 employees are segmented as follows:

  - Project Managers (VP)   43
  - Other Officers   5
  - Principals   124

- Senior Consultants   86
- Consultants   39
- Support and Other   20

- TSC assigns employees by practice area. TSC offers its clients high quality industry and systems knowledge, in each industry sector. TSC provides technical and functional expertise.

- Distribution of staff capabilities:

  - Management, Strategy and Planning   5%

  - Legal Support, Contract and Financial Adm.   4%

  - Project Management   20%

  - Systems Development and Implementation   50%

  - Sales   5%

SI Strategic Alliances

- TSC does not have a formal program for alliances. TSC prefers to form them on a contract-by-contract basis. For example, TSC has collaborated with IBM on several projects in the past.

- TSC is a Preferred Integrator for PeopleSoft Financial products.

- TSC is a Hewlett-Packard Channel Partner.

- TSC also has an exclusive consulting agreement with Robert Kurimsky, former CIO of Philip Morris USA. He provides TSC with knowledge of technology issues facing large multinational consumer product companies.

Marketing Strategy

- In all industry sectors, TSC markets its services to clients by employing a business case justification process. The process specifies the business benefits resulting from the project as well as the timing and the process for maximizing these benefits.

- The business case analyzes the client's business objectives, operational structure and systems architecture to determine which areas will bring the highest returns on investment

- TSC uses the following analytical and financial techniques in its business case process:

  - Internal rate of return
  - Payback
  - Net present value
  - Cash flow analysis
  - Financial statement impact

- TSC markets its products and services through its own sales force, in close consultation with its project managers. TSC bills its clients for project work on a time-and-material basis.

- TSC's business development efforts are based primarily upon personal contacts, the reputation of the Company and its senior project managers, a direct marketing program and industry trade shows and conventions.

SI Customer Base

- Contracts have been signed with the following major corporations:

  - AT&T
  - Aetna
  - Ameritech Publishing
  - Borden
  - Equitable
  - Fidelity Investments
  - Goldman, Sachs and Co.
  - Georgia-Pacific
  - Pepsi
  - Rockwell International
  - Whirlpool

- Recent project examples in the insurance industry sector include:

  1. Customer service
  2. Direct marketing
  3. Imaging
  4. Customer service center
  5. Life insurance client

- Recent project examples in the capital markets industry sector include:

  1. Fixed-income trading
  2. Risk management
  3. Back-office systems
  4. Official Books
  5. Securities Processing Systems

- Recent project examples in the manufacturing industry sector include:

  1. Computer-aided acquisition and logistics support

  2. Financial and performance management

  3. MRP Inventory control

  4. Accounts payable control

  5. Order fulfillment/processing

  6. Sales management

  7. Wireless Communication System

Summary and Future Directions

- TSC showed strong growth in its consumer product sector with revenues increasing 23% in 1993 reaching $37.4 million and accounting for 60% of total revenues. Growth was derived primarily from the design, development and implementation of customer service, order processing, inventory management and promotion systems.

- Along with an expanding client base, strong growth continued in the financial service sector, with revenues increasing by 94% to $17.4 million. Growth was derived from the development of trading, customer service and administrative systems.

Company Profile

May 1994

BSG Consulting Inc.

Chairman & CEO:Steven Papermaster
BSG Consulting, Inc.
11 Greenway Plaza, Suite 900
Houston, TX 77046-1102
Phone: (713) 965-9000
Fax: (713) 993-9249

BSG

Leading the change. Together.™

The following profile outlines the products, services and support offered by BSG to their Systems Integration clients.

1. Key SI Contacts

Richard Scruggs, Managing Director, Business Development

Beth Miller
Communications Senior Manager

Kim W. Padgett
Public Affairs

2. Description of Principal Business

BSG is a systems integrator that uses client/server and other technologies to help customers meet their business objectives and goals. BSG is an integrator of corporate computing systems. BSG seeks organizations that recognize the

need to change and adapt their technology needs in order to remain competitive.

BSG's primary goal is to help companies manage the transition from mainframe computing to networked client/server systems.

BSG understands the need for its clients to incorporate PCs, networks and graphical user interfaces to maximize their information needs.

In the 1980s, BSG began working with companies in the oil industry following the collapse of oil prices. These

BSG *Leading the change. Together.*™

track and measure their processes and products.

BSG helped develop client/server solutions to monitor, track and report on the activity of nationwide pipelines and meet regulatory guidelines for gas transportation companies.

BSG has been in the commercial systems integration market for seven years and has no participation in federal systems integration markets. .

BSG offers the following consulting and system integration services:

- Downsizing Information Systems
- Business Process Re-engineering
- Distributed Systems & Applications
- Client/Server Systems Planning & Development
- Systems Maintenance & Network Management
- Disaster Recovery Planning
- Network Assessment

BSG offers technology assistance in the following areas:

- Object-Oriented Design & Development
- Workflow and Document Imaging
- Network Management & Support Software
- Windows-based Front End Development Tools

- High Performance Networks
- Distributed Groupware
- Database Server Engines

3. BSG Competitive Position

The following companies are competitors in the systems integration market:

1. SHL Systemhouse
2. Andersen Consulting
3. Ernst & Young
4. Cambridge Technologies

BSG Corporation realizes that companies are faced with global competition and that a high proportion of these companies do not have the flexibility to react to the competition or a rapidly changing market. BSG helps companies migrate to cost-effective, productive client/server-based systems that allow them to prepare for future changes and operate more efficiently.

The founding premise of the company is the transition from mainframe computing to client/server architecture. Time-compressed decision-making and corporate downsizing have forced businesses to reorganize their mainframe and management information departments.

BSG developed and uses the BluePrint Object Development Environment, a client/server technical architecture and toolset. It provides the following advantages:

- Facilitates a company's transition from mainframes to client/server systems

- Creates a reusable architecture that can reduce the customer's time to develop future projects and systems

BSG continues to experience a greater demand for customized software application development. BSG's client/server systems are built specifically for customer needs.

BSG has published the following books and technical newsletters:

- *Downsizing Information Systems*
- *Client/Server Computing*
- *Enterprise-Wide Networking*
- *NetWare Supervisor's Guide*
- *NetWare Programmer's Guide*

Many of these books have been translated into German and Japanese-Kanji. BSG is currently editing the Downsizing book for re-release and is finalizing a new book on application development using Powersoft's PowerBuilder software. BSG representatives continue to author articles and speak at national trade shows and association meetings on migration to client/server-based systems.

4. Markets Served

BSG has expanded its technical expertise into the following vertical markets:

- Manufacturing
- Insurance
- Transportation
- Pharmaceuticals
- Consumer products
- Health care
- Biotechnology
- Telecommunications
- Distribution
- Financial
- Energy & Petrochemicals

Rating the revenue potential for each vertical sector from 1 to 5 scale, where 5 means extremely high—the Company rates all 11 industry sectors above a 4.

5. Recent Events

First Quarter 1993: BSG added an office in New York city, led by Managing Director, Steve Strandberg. Joining BSG from the existing Dallas office was David Pickrell, Managing Director.

Third Quarter 1993: BSG opened offices in Atlanta and Chicago. The Atlanta office will be led by Managing Director, Rick Donnelly, while Managing Director, George Jones, heads the Chicago office.

First Quarter 1994:

- BSG added BSG Alliance/IT—a new division created to provide business process transformation and systems management. The new division is led by President, Robert Pickering.

- BSG formed a partnership with Tenneco Gas Subsidiary—Energy TRACS—to provide systems integration services on implementations of Energy TRACS portfolio of natural gas transportation systems and software.

- BSG formed an partnership with Phillips Communications and Processing, a subsidiary of Netherlands-based Phillips Electronics. Through the partnership, managed by BSG's Alliance/T, the two companies will deliver systems

management services for companies migrating from mainframe computing to client/server environments.

6. SI Organization

BSG's core structure consists of three companies:

1. BSG Consulting—Balances technical expertise in client/server computing and other emerging technologies with direct knowledge of client's businesses, industries and strategic objectives. BSG Consulting provides consulting and systems integration services to Fortune 1000 companies.

2. BSG Education—Provides training in client/server computing technologies. Since inception, BSG Education has trained more than 10,000 students in Novell, Lotus, PowerBuilder and Microsoft vendor-authorized courses. BSG believes that training is the key factor in implementing client/server systems. Classes are available at BSG or at a customer site.

3. BSG Alliance/IT—Designed for long-term technology-based alliances that focus on business transformation. Alliance/IT has offices in Atlanta, Chicago, Dallas and New York and Houston.

BSG Corp. is the parent company for BSG Consulting, BSG Education and BSG Alliance/IT.

BSG plans to expand to the West Coast and Southeast Coast along with international offices in Europe & Asia.

BSG's Executive staff includes:

BSG

- Steven G. Papermaster, Chairman and CEO of BSG Corp.—The founder of BSG Corporation and a former consultant with Andersen Consulting.

- J. Benton Mayberry, CHIEF & Managing Director, Tenneco Energy TRACS partnership—A founding member of the Company. As CHIEF (which stands for Culture, History, Infrastructure, Empowerment and Fun) Mayberry directs Human Resources, Quality Management and Training.

- Jeffrey J. Weiner, Managing Director, Finance & Administration—Served as Controller of Manufacturing and Engineering for the Anadrill division of Schlumberger, a oil field conglomerate, prior to joining BSG.

BSG Alliance/IT

- Robert Pickering, President, BSG Alliance/IT—Formerly Partner-In-Charge of the outsourcing consulting practice for Price Waterhouse.

- Jack Gates, Vice President of Sales

- Norm Smith, Vice President of Operations

BSG Consulting

- Don G. Baker, President BSG Consulting—A former managing partner at Andersen Consulting.

• Richard E. Donnelly, Managing Director, Atlanta

• George P. Jones, Managing Director, Chicago & Information Systems

• David Pickrell, Managing Director, Dallas and Technology

• Jay H. Rosenfeld, Managing Director, Houston

• Richard Scruggs, Managing Director, Business Development & Sales

• Steve Strandberg, Managing Director, New York.

BSG Education
• Steven L. Guengerich, President BSG Education & Communications

• John A. Hinners, Managing Director, Finance & Administration.

7. SI Business Objectives

In 1992, BSG's revenues were $12 million and are estimated to have increased to approximately $26.5 million in 1993. BSG is forecasting growth of 50% in fiscal 1994.

Operating margins in their systems integration business were 36%.

Revenues (100%) are derived from the commercial market and the company has no federal business. All revenue is derived from professional services and from work as a prime SI contractor.

BSG's revenues are evenly split between a time-and-material basis and a fixed period. The average value of a contract is

$500,000. With distributed systems representing 100% of SI projects.

BSG has approximately 30 commercial clients.

8. SI Capabilities

BSG's total system integration staff consists of 400 employees. The following table lists key staff capabilities:

Business Management Consulting	50%
Business Process Re-engineering	20%
Organizational Change Management	20%
General Management	20%
Project Management	20%
Applications Design and Development	20%
Network Design and Development	20%
Applications Maintenance	20%
Computer Systems	20%
Network Operations	20%
Training/Education	20%
Sales	20%
Hardware/Software Evaluation/Acquisition	20%
LAN Installation	100%
LAN Administration	100%
Client/Server	100%
Open Systems	20%

9. Strategic Alliances

BSG is independent of vendor partnerships, however, they do have close relationships with the following vendors:

• Powersoft
• Novell
• Microsoft
• Lotus
• Hewlett-Packard
• Compaq
• Sun
• Oracle

- Sybase
- Trinzic

- Tenneco Gas
- Union Pacific Railroad

10. Marketing Strategy

During each project, BSG becomes part of each client's organization and Company consultants work as partners with users and information services departments to implement mission-critical systems.   .

Managing Directors run each office with help from directors in each office. Projects are staffed by Senior Managers for Consulting and Technical Managers.

The structure includes managers, supervisors, consultants and support staff.

BSG's marketing strategy includes:

- Newsletters

- Formal breakfast meetings

- Network meetings with present and prospective clients.

- Sales Director to follow leads

- Strong reputation within the SI market

11. BSG Client Base

BSG client's include the following companies:

- AI Credit Corp.
- Berlex Laboratories
- Enron Gas Liquids, Inc.
- Exxon Co.
- Fox Meyer Distribution
- GE Capital Corp.
- Nabisco Foods
- SONY
- Transwestern Pipeline Co.

12. Summary and Future Directions

BSG is well positioned to ride the migration from mainframe computing to client/server architecture. Revenues have exploded from $7 million in 1991 to a projected $35 million in 1994.

BSG will continue to focus on client/server systems and other emerging technologies.

BSG needs to expand beyond the energy sector and work with companies such as AI Credit and Berlex laboratories indicates such a move taking place.

BSG needs to develop the consulting side of the business so that they gain entry into a broader spectrum of accounts. The creation of BSG Alliance/IT is a good first step as it broadens the platform of services on which BSG can grow.

BSG Consulting Inc.
May 1994

Company Profile

June 1994

Keane, Inc.

input

President & CEO : John F. Keane
10 City Square
Boston, MA
Phone: (617) 241-9200
Fax: (617) 241-9507

K
KEANE

Description of Principal Business

- Keane designs, develops and maintains software for manufacturing, insurance and financial services companies as well as hospitals. Keane, Inc. is divided into two operating divisions: the *Information Services Division (ISD)* and the *Healthcare Services Division (HSD)*.

- The Healthcare Services Division develops patient care along with financial and other clinical application software for hospitals and other types of long-term care facilities. Keane, Inc.'s

flagship software product line is Threshold, a family of UNIX-based software products.

- Keane, Inc. offers the following services:

  - Business Process Redesign

  - Information Strategy Planning

  - Business System Analysis and Design

  - Software Development and Testing

  - Project Management/Training

BIPR

- Application Management

- Client/Server Planning and Development

- Technology Migration

- IS Assessments

- Help Desk Services

Keane's Competitive Position

- The custom software market is fragmented, extremely competitive and marked by rapid technological change.

- No single company dominates the market, but Keane believes it is among the top ten custom software developers in the U.S.

- Keane, Inc.'s competitors vary by the type of service offered.

- In the systems planning market, competitors include:

  - Large Public Accounting Firms
  - Andersen Consulting
  - Cambridge Technology Partners
  - Electronic Data Systems
  - American Management Systems

- In the systems implementation market, competitors include:

  - Analysts International Corp.
  - Cap Gemini Sogeti
  - Computer Horizons
  - Computer Task Group
  - Local Firms

- In the health care market, competitors include:

  - SMS Corp.
  - HBO and Co.
  - MEDITECH

- In the systems planning and implementation markets, some competitors have larger financial resources than Keane, Inc.

- Keane, Inc. believes the following factors are important in the custom software industry:

  - Project Management Capability
  - Technical Expertise
  - Responsive Customer Service
  - Cost-Effective Solutions

- Keane, Inc. believes the following industry factors are important in the health care industry:

  - Size and stability of the service provider

  - Providing service to carefully targeted health care markets

- Keane, Inc. believes that it can compete through a strategic acquisition program, by acquiring companies with clients in market segments not currently covered by Keane, Inc.. Examples include long-term care facilities, which were covered by Ferranti Healthcare Systems, and teaching hospitals, which were covered by Professional Healthcare Systems (PHS).

Markets Served

- Keane, Inc. markets its products through its own sales force and targets large corporations with recurring software needs and large IS budgets.

- The majority of Keane, Inc.'s revenues are derived from manufacturing, banking, insurance and financial services market sectors. The spread of business among each industry sector served is as follows:

  - Insurance and Other Finance   5%
  - Banking   8%
  - Discrete Manufacturing   30%
  - Process Manufacturing   10%
  - Health Care   11%
  - Business Services   3%
  - Transportation   10%
  - Communications   5%
  - Utilities   6%
  - Retail Sales   4%
  - Wholesale Sales   8%

- Projects for manufacturing include:

  - Factory Operations
  - Materials Management
  - Warehousing and Distribution
  - Accounting
  - Marketing

- Projects for financial services include:

  - Marketing
  - Mutual Fund Analysis
  - Consumer Information
  - Commercial and Consumer Loans

- Projects for insurance include:

  - Claims Processing
  - Agency Management

- Premium and Loss Reporting
- Accounting and Compensation
- Pension Management

- HSD's software application products include:

  - Accounting
  - Compensation and Benefits Systems
  - Patient Registration and Scheduling
  - Patient Care and Clinical Functions

Recent Events

- In January 1994, Keane, Inc. acquired AGS Information Services, AGS Federal Services, AGS Management Systems and other associated businesses. AGS was a subsidiary of Nynex Corporation.

- AGS clients ranged in size from small growth companies to Fortune 500 class companies. AGS Information Services core business was systems engineering and information technology consulting.

- AGS industry sectors included:

  - Government Agencies
  - Utility Companies
  - Insurance Companies
  - Consumer Products

- AGS core services included:

  - Business Planning
  - Information Systems Planning
  - Support Services

- AGS Information Services had 1993 revenues of approximately $160 million. This acquisition is projected to double the size of Keane.

- The acquisition was paid for in cash and debt and will not dilute future earnings.

- AGS Federal Services provides cost-effective systems for federal agencies.

- In August 1993, Keane, Inc. acquired Professional Healthcare Systems which added approximately 70 hospitals in 28 states to Keane's client list.

- In January 1993, Keane, Inc. acquired GE Consulting Services, a subsidiary of General Electric. The acquisition added more than 1,000 employees in 21 branch offices, increasing Keane's market share in many local markets.

Keane Organization

- Keane, Inc. was founded in 1965 by John F. Keane and is a public corporation traded on the American Stock Exchange.

- A summary of key organizational units and contacts within Keane is shown below:

  - John F. Keane, President and CEO

  - Ray Becker, VP—Information Services Division, Western Region

  - Edward Longo, VP—Information Services Division, Eastern Region

  - Raymond Paris, VP and General Manager—HSD

  - Donald Amaya, VP—Human Resources

  - Wallace Cataldo, VP—Finance

SI Revenues

- Company revenues increased by 77% in 1993 to reach $176 million.

- ISD revenues accounted for nearly 90% of Keane revenues, or $161 million.

- HSD revenues increased by 51% from 1992, to reach $15 million, with most of the increase due to the acquisition of Ferranti Healthcare Systems.

- Net income increased by 44% in 1993, to reach $9.1 million.

- For the first quarter ending March 30, 1994 revenues increased by 104% to $86.2 million, from $42.3 million in 1993. The increase in sales and earnings were the result of the AGS acquisition.

- Keane's five largest clients accounted for 45% of total revenues in 1993. IBM and GE were the only customers in 1993 that accounted for more than 5% of total sales.

- Following is a five-year financial summary (revenues and income shown in thousands of dollars):

Exhibit 1

Five-Year Financial Summary ($ Thousands)

Year	1989	1990	1991	1992	1993
Revenues	77,196	93,020	95,562	99,279	175,800
Net Income	3,557	5,190	5,891	6,278	9,058

Strategic Alliances

- Keane, Inc. has no major strategic alliances or partnerships.

- Keane, Inc. has arrangements with Powersoft and Easel Corp. to utilize their tools for client needs.

Marketing Strategy

- Keane markets its software through its own direct sales force, located in each of the branches. The company has more than 40 branch offices located in major metropolitan areas, across the U.S. and Canada.

- Each office has the staff and technical support to service its target market.

- Each office employs between 50 and 200 technical staff and is led by a branch manager. As of April 1994, Keane, Inc. had 3,775 full time employees—3,274 of these are technical staff whose services are billable to clients.

- Keane's sales force uses a targeted marketing approach in that each salesperson is assigned a limited number of accounts.

- Keane tries to land small contracts and deliver them on time, below budget. This enables the company to leverage the initial contract into larger contracts. Approximately 90% of 1993 sales was derived from existing clients.

Keane Customer Base

- Major clients in manufacturing include:

  - Bethlehem Steel
  - Coca-Cola Company
  - Eastman Kodak
  - General Electric
  - NEC
  - Motorola, Inc.
  - Whirlpool

- Major clients in financial services include:

  - Harris Bankcorp
  - Kidder Peabody
  - The Putman Companies
  - Fidelity
  - Bank of Boston

- Major clients in insurance include:

  - Aetna Life Insurance
  - American International Group
  - New Hampshire Life
  - Prudential Group
  - UNUM Corp.

Summary and Future Directions

- The AGS acquisition will double the size of Keane, Inc. and give it the ability to enter the federal sector.

- Keane has evolved from a regional player in the custom software market into a nationwide company and should continue to grow in the future—internally and through strategic acquisitions.

- Keane believes the following business trends will increase the demand for its products and services in the next decade:

  - The need to reduce time to market for new products and services

  - The need to "do more with less"

  - The need to improve accessibility to information

- Keane, Inc. will continue its present strategy of leveraging its client base through selected acquisitions.

Analysts International Corporation

Chairman & CEO: Frederick W. Lang
President & COO: Victor C. Benda
7615 Metro Boulevard
Minneapolis, MN 55439-3050
Phone: (612) 835-5900
Fax: (612) 897-4555

Input Library

Status:	Public
Employees:	2,600
Revenue:	$ 175,982,000
Fiscal Year End:	6/30/94

Key Points

- Analysts International Corporation (AiC) has 25 branch and 13 field offices in the U.S.

- AiC served 650 clients on a total of 3,125 projects during fiscal year 1994.

- Revenue growth of 23% was attributed primarily to strong growth in services provided to the electronics, services and transportation industries.

- Decrease in net income of 3.8% was primarily due to reduction in billing rates at a large client.

- A three-for-two stock split was declared in August 1993.

- AiC also announced the establishment of a field office in Tulsa (OK), increasing its number of field offices to 13 in the U.S.

Company Description

AiC was formed in 1966 as a publicly held corporation to provide professional services to a wide variety of industries. Since its inception, AiC has completed more than 10,000 projects for more than 4,500 clients.

BIMR

Operations and Structure

AiC is currently organized into four U.S. geographic regions, each managed by a regional vice president. These regions are Eastern, Central, Midwest, Southern.

AiC provides its services through its branch and field offices, assigned on a geographic basis to one of the four regions.

- Each branch office is staffed with technical personnel and managed by a branch manager, who has primary responsibility for the administration, personnel, recruiting, customer relations and profitability of the branch.

- The branch manager has broad authority to conduct the operations of the branch, subject to adherence to corporate policies.

- In general, field offices are established to support specific projects for one or more specific customers at locations not served by a local branch office and are managed by a branch office when the volume of business and the prospects for additional business justify the additional location expenses associated with branch office status.

Regional and branch offices are in Atlanta (GA); Austin, Dallas, and Houston (TX); Bellevue (WA); Boca Raton and Tampa (FL); Cleveland and Columbus (OH); Concord (CA); Denver (CO); Durham/Raleigh (NC); Indianapolis (IN); Kansas City (MO); Lexington (KY); Livingston (NJ); Minneapolis and Rochester (MN); New York City and Rochester (NY); Omaha (NE); Phoenix (AZ); Schaumburg (IL); Southfield (MI); and St. Louis (MO).

AiC has field offices in Akron/Canton (OH), Boston (MA), Boulder (CO), Charlotte (NC), Cincinnati (OH), Des Moines (IA), Miami (FL), Philadelphia (PA), Sacramento and San Jose (CA), Washington, D.C., Toronto (Ontario, Canada), Tulsa (OK) and Cambridge (England).

Financials

Fiscal 1994 revenue reached $176.0 million, a 10% increase over fiscal 1993 revenue of $159.7 million. Net income decreased 4%, from $8.3 million in fiscal 1993 to $8.0 million in fiscal 1994.

Revenue growth was primarily attributed to increases in billable hours of service rendered to clients as evidenced by increases in technical personnel. Rate increases have not contributed significantly to revenue increases because of prevailing competitive conditions that have made it difficult for the company to increase the hourly rates it charges for its services.

Salaries, contracted services and direct charges, which represent AiC's direct labor costs, have remained constant as a percent of revenues between fiscal 1994 (71.2%), fiscal 1993 (70.5%) and fiscal 1992 (70.4%).

During fiscal 1994, AiC had revenues of $68,000 per employee compared with $70,000 per employee in fiscal 1993.

A five-year financial summary follows:

Analysts International Corporation
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year				
	6/94	6/93	6/92	6/91	6/90
Revenue	$176.0	$159.7	$129.6	$116.8	$107.8
Percent change from previous year	10%	23%	11%	8%	20%
Income before taxes	$12.8	$13.5	$8.7	$9.0	$9.9
Percent change from previous year	(5%)	55%	(3%)	(9%)	18%
Net income	$8.0	$8.3	$5.4	$5.6	$6.0
Percent change from previous year	(4%)	54%	(4%)	(7%)	20%
Earnings per share (a)	$1.10	$1.15	$0.76	$0.79	$0.86
Percent change from previous year	(4%)	51%	(4%)	(8%)	18%

(a) Adjusted to reflect a 3-for-2 common stock split in the form of a stock dividend distributed September 30, 1993.

Market Financials

AiC derives its revenue from a range of commercial industry clients but the largest client is IBM.

AiC derived approximately 29% ($51.0 million) of fiscal 1994 revenue, 36% ($57.5 million) of fiscal 1993 revenue, and 32% ($41 million) of fiscal 1992 revenue from various operating units and divisions of IBM.

A three-year summary of revenue sources by industry served, as provided by AiC, follows:

Analysts International Corporation
Three-Year Source of Revenue Summary
($ Millions)

INDUSTRY	FISCAL YEAR 1994	1993	1992
Electronics	37%	42%	38%
Manufacturing	10%	12%	15%
Banking and finance	8%	7%	8%
Telecommunications	8%	6%	7%
Services	7%	6%	5%
Oil and chemical	6%	5%	6%
Transportation	5%	5%	3%
Insurance/health care	5%	4%	5%
Food	4%	4%	5%
Merchandising	4%	4%	4%
Power and utility	3%	3%	3%
Government	1%	1%	1%
Other	2%	1%	–
TOTAL	100%	100%	100%

Source: INPUT

Geographic Markets

Approximately 95% of AiC's revenue is derived from the U.S. and 5% from international sources.

Employees

As of June 30, 1994, AiC employed 2,600 people, of which 75 are sales staff, 45 are recruiting staff and approximately 2,250 are systems analysts, computer programmers and other technical personnel whose services are billable to clients.

Key Products and Services

Virtually 100% of AiC's fiscal 1994 revenue was derived from professional services.

AiC has extensive experience in designing and implementing systems on a variety of large- and small-scale computer systems.

Areas of specialization include the following:

- Banking and insurance

- Manufacturing and inventory control

- Business and accounting

- Systems software, including database management systems, compilers and operating systems

- Scientific, specialized control and related applications

- Communications systems for the private sector

Professional services are provided in the following functional areas:

- Generation of functional and detailed design specifications

- Systems software design and development

- Programming, implementation, maintenance, testing and documentation

- Special-purpose systems design and/or modifications, timeshare, process control and medical systems

- Systems orientation and training seminars

- Technical audits

- Equipment evaluation and requirements analysis

- Systems resource analysis

Examples of AiC projects during fiscal 1994 include the following:

- Development of a system for automation of problem resolution of medical-related products to FDA standards

- Design of automated forms and compliance systems

- Development of an investment management system for a banking institution

- Development of a telemarketing and customer contact system

Marketing and Sales

AiC sells its services through its own direct sales force located at its branch offices.

Competitors

National competitors include professional services divisions of large companies such as IBM and DEC. AiC also competes with other national professional services companies such as Andersen Consulting, Computer Task Group, CGA, Keane Inc., and Computer Horizons.

AiC branch locations compete with various local professional services firms.

INPUT Assessment

AiC is a strong participant in a large market. INPUT estimates the US Professional Services market to be $23 billion in 1994.

The AiC branch office structure allows the company to react quickly to local market changes and will help provide the flexibility that will be necessary for success in the future. The extensive network of branch and field offices will also provide a safeguard against regional business fluctuations.

A potential problem for AiC is competition from small professional services companies as the low overheads of these small companies make it possible for aggressive pricing. This could result in further erosion of the AiC revenue per employee and subsequent profitability.